

REMARKS

Applicants believe no new matter is added by these amendments to the specification and claims. Claims 1-51 have been canceled. After entry of the present amendments, Claims 52-70 will remain in this application.

Amendments to the specification. The addition of the paragraph at page 1, line 13, indicates a research agreement between the present assignee, Mendel Biotechnology, Inc. and --Monsanto Company-- (Applicant had previously identified the latter as "Monsanto Corporation").

The amendment to add SEQ ID NOs, to the figures, and SEQ ID NOs: 431-704 is supported by the Figures as filed.

Amendments to the claims.

Support for 85%, 90% and 95% identity to the presently claimed polypeptides is provided on, for example, page 55, lines 1-7.

Support for a "nucleic acid construct" is provided, for example, on page 68, lines 20-21 or on page 108, line 9.

Response to specific items within the Office action.

Item 5. Applicant has attached figures with SEQ ID NOs. added in parentheses. The newly added sequences in the Sequence Listing correspond to sequence derived from the figures.

Priority. Applicant is investigating the date a transgenic plant transformed with a nucleic acid construct comprising G922 (SEQ ID NO: 3 and 4) was reduced to practice. Applicant does wish to call to the Examiner's attention US provisional application 60/125,814, filed March 23, 1999 (Applicant believes this constitutes a reduction to practice before the April 1999 publication of the Pysh reference) which is claimed as priority application. Application 60/125,814, which is entitled "Constructs for Phenotype Alteration"; discloses sequences that relates to "recombinant constructs for the regulation of gene expression in plants and for effecting changes in plant phenotype" ("Field of the Invention"). This application provides methods for transforming plants (see for example, Example IV on page 59) and includes the G922 DNA and protein sequences in the "family_9" list of sequences. Applicant notes that there are several inventors in common between Application 60/125,814 and the present application.

Items 7-8. Rejection under 35 USC 112, first paragraph, enablement.

Applicant believes the amendment of the present claims avoids this rejection.

The newly added claims are supported by the specification as described above and in the response filed 13 June 2006.

Applicants identified numerous closely related sequences with less than 85% identity to SEQ ID NO: 4. These sequences derive from both monocots and dicots, indicating that the sequence and likely the function of these related sequences are well conserved, that functional molecular species exist in abundance in nature, and that it is thus be a matter of routine to find other closely related sequences and test them in plants.

The Wands factors weigh in Applicants' favor

At the time the instant application was filed, "the state of the art" and "the relative skill of those in the art favored Applicants' arguments and claims, as evidenced by the prior art teachings and Applicants' specification. The amount of experimentation to practice the full scope of the claimed invention might have been extensive, but it would have been routine. The techniques necessary to do so were well known to those skilled in the art. See, e.g., *Johns Hopkins Univ. v. Cellpro, Inc.*, 152 F.3d 1342, 1360, 47 USPQ2d 1705, 1719 (Fed. Cir. 1998) ("test [for undue experimentation] is not merely quantitative . . . if it is merely routine").

Enablement is a legal standard of whether a patent enables one skill in the art to make and use the claimed invention. *Raytheon v. Roper*, 724 F.2d 951, 960, 220 USPQ 592, 599 (Fed. Cir. 1983) and is not precluded even if some experimentation is necessary. Nothing more than objective enablement is required, and therefore it is irrelevant whether this teaching is provided though broad terminology or illustrative examples. *In re. Marzocchi*, 439 F.2d 220, 223, 169 USPQ 367, 369 (CCPA 1971). An analysis of whether the claims are supported by an enabling disclosure requires a determination of whether that disclosure contained sufficient information regarding the subject matter to enable one skilled in the pertinent art to make and use the instant transgenic plants. It is a matter of routine to use bioinformatics-based analysis to find SCR sequences related to SEQ ID NO: 4 that have a minimum percentage identity to a defined subsequence, then transform plants with the sequences and test the plants in order to find operable species. Once found, the presence of SCR conserved domains are putative indicators of function. It is a matter of routine to clone sequences identified on the basis of having the claimed conserved domains into nucleic acid constructs, transform and then test plants using routine assays. The artisan could rely on art-recognized methods to perform these tasks and specifically could use methods provided in the specification.

Art-practiced methods also include "shuffling", disclosed in U.S. patent 5,837,458 to Minshall and Stemmer, U.S. patent 6,579,678 to Patten and Stemmer, and others. These references provide

techniques for mutagenizing individual sequences that are part of a larger set, and the individual sequences are then tested by “screening or selecting the plurality of recombined nucleic acids to identify one or more evolved polynucleotides with the desired property” (U.S. patent 6,579,678, Claim 1). As indicated by these and other publications, the experimentation of making the claimed nucleic acids is considered routine.

The pending Office action analysis also fails to take into account the fact that proteins can be mutated to a significant degree and at multiple sites and maintain a biological function. The pending Office action analysis fails to take into account that, in addition to the art-recognized methods that may be used to produce the claimed plants, the specification provides extensive guidance for screening sequences, lists functional species, lists species predicted to function, and describes how to: (1) find sequences with SCR conserved domains with a specified degree of homology with similar subsequences in SEQ ID NO: 4; (2) calculate the percent identity between the second conserved domain of SEQ ID NOs: 4 and the newfound sequence; and, as necessary, (3) test the newfound sequence to determine if it functions as is presently claimed. Guidance for performing these steps is provided, the methods are well known, and functional species are disclosed. Ample guidance is therefore provided to allow one of skill in the art to identify additional functional sequences. The amount of experimentation necessary and the amount of guidance presented in the specification are sufficient to allow the skilled artisan to practice the methods and make the plants set forth in the claims.

The instant claims are similar to claims presented in a Precedential Opinion before the Board of Patent Appeals and Interferences

Regarding its publication of Precedential Opinions, “The United States Patent and Trademark Office is increasing the transparency of Board of Patent Appeals and Interferences decision making by increasing the number of Board opinions that may be cited” (OG Notices: 23 January 2007).

In the Precedential Opinion of Appeal No. 2007-0819, Application 09/667,859 (decided May 31, 2007) before the Board of Patent Appeals and Interferences, claim 73 (the “exemplary claim” in this analysis) and others were rejected for lack of enablement. Claim 73 reads:

“An isolated nucleic acid molecule comprising a polynucleotide encoding a polypeptide at least 80% identical to amino acids 22-221 of SEQ ID NO:2, wherein the polypeptide binds CD48.”

Applicants note that the exemplary claim 73 is similar to the instant claims in that a specific percent identity to a region of a sequence is being claimed, albeit a lower percentage identity than that which is instantly claimed.

The Opinion of Appeal indicates that: “The Examiner found lack of enablement due to the “at least 80% identity language,” in the absence of any working examples, other than SEQ ID NOs:1 and 2. He cites examples in the literature in which very small changes in sequence, even one amino acid, yield a different function.”

The exemplary specification discloses amino acid sequences for three proteins whose nucleotide sequences would fall within the scope of claim 73. The instant specification provides many related functional polypeptide sequences (see Table 1) that extend the scope of the claimed sequences beyond what is presently being claimed. Applicants are entitled to claim less than the invention originally presented.

Similar to the exemplary specification, the instant specification does not disclose variants in which the nucleotide sequence encoding amino acids 22-221 of SEQ ID NO: 2 is varied. Thus, “the Specification does not disclose “which 20% . . . of amino acid residues should be changed in order to maintain the biological functions’ ”. However, the instant specification does provide numerous closely related sequences from which it can be determined where corresponding amino acid variations can be tolerated and where they are strongly conserved.

Similar to the exemplary specification, the instant specification “teaches in detail how to: 1) make variants of SEQ ID NOs: 1 and 2; 2) calculate the percent identity between SEQ ID NOs: 3 and 4 and the variant sequence; and 3) test the variant sequence.

The exemplary specification does not disclose a correlation between function and structure responsible for function “such that the skilled artisan would have known what modifications could be made of the very large number of modifications potentially encompassed by claim 73 without losing function”. The instant specification does describe the SCR conserved domains; the closely related species provided have these domains..

At the time Appellants’ application was filed, the level of skill in the relevant art (molecular biology) was high. Methods of making the claimed sequences and screening for activity were known in the art and described in the exemplary and the instant specification.

Similar to the exemplary application, the experimentation involved to produce other sequences within the scope of the claims” and thus to practice the full scope of the claims, would have been well within the skill of those in the art and thus would have been routine.

The Precedential Opinion also indicates “with respect to enablement, the other Wands factors weigh in Appellants’ favor, particularly “the state of the art” and “the relative skill of those in the art,” In re Wands, 858 F.2d 731, 736, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988), as evidenced by the prior art

teachings and Appellants' Specification". The amount of experimentation to practice the full scope of the claimed invention might have been extensive, but it would have been routine. The techniques necessary to do so were well known to those skilled in the art. See, e.g., *Johns Hopkins Univ. v. Cellpro, Inc.*, 152 F.3d 1342, 1360, 47 USPQ2d 1705, 1719 (Fed. Cir. 1998).

The Opinion of Appeal concludes with "One of ordinary skill in the art would not have been required to perform undue experimentation to practice the invention of [exemplary] claim 73" to a polypeptide at least 80% identical to amino acids 22-221 of SEQ ID NO:2, wherein the polypeptide binds CD48. This is a very similar analysis as might be applied to the instant claims to a transgenic plant comprising a recombinant polynucleotide encoding a polypeptide at least 85% identical to amino acids 78-175 of SEQ ID NO: 2, wherein the expression of the polypeptide can confer the claimed traits.

In light of these amendments, arguments and experimental observations confirming Applicants' disclosure and claims, Applicants request that the rejection under 35 U.S.C. § 112, first paragraph, for lack of enablement, be withdrawn.

Item 8. Rejection under 35 USC 112, first paragraph, written description.

Applicant believes the amendment of the present claims avoids this rejection under 35 U.S.C. § 112, first paragraph.

The instant claims are similar to claims presented in the Written Description Training Materials

Applicants ask the Examiner to consider the Written Description Training Materials, Revision 1, March 25, 2008. Example 11 of the Training Materials describes a "specification [that] discloses a polynucleotide having the nucleic acid sequence of SEQ ID NO: 1, which encodes the polypeptide of SEQ ID NO: 2. The polypeptide of SEQ ID NO: 2 has the novel activity X, and does not share significant sequence identity with any known polypeptide or polypeptide family. The specification does not disclose any nucleic acid sequences that encode a polypeptide with novel activity X other than SEQ ID NO: 1". The following claims are made in this example:

Claim 1. An isolated nucleic acid that encodes a polypeptide with at least 85% amino acid sequence identity to SEQ ID NO: 2.

Claim 2: An isolated nucleic acid that encodes a polypeptide with at least 85% amino acid sequence identity to SEQ ID NO: 2; wherein the polypeptide has activity X.

The specification of this example "discloses only a single species that encodes SEQ ID NO: 2; i.e., SEQ ID NO: 1. There are no other drawings or structural formulas disclosed that encode either SEQ ID NO: 2 or a sequence with 85% identity to SEQ ID NO: 2." "The genetic code and its redundancies

were known in the art before the application was filed. The disclosure of SEQ ID NO: 2 combined with the pre-existing knowledge in the art regarding the genetic code and its redundancies would have put one in possession of the genus of nucleic acids that encode SEQ ID NO: 2. With the aid of a computer, one of skill in the art could have identified all of the nucleic acids that encode a polypeptide with at least 85% sequence identity with SEQ ID NO: 2. Thus, one of ordinary skill in the art would conclude that the applicant was in possession of the claimed genus at the time the application was filed” (emphasis added).

“The specification satisfies the written description requirement of 35 U.S.C. 112, first paragraph, with respect to the scope of claim 1” (Conclusion, on page 38, ¶2)

With regard to Claim 2 of the example in the Training Materials, “the specification discloses data from deletion studies that identify two domains as critical to activity Y, i.e., a binding domain and a catalytic domain. The specification proposes that conservative mutations in these domains (e.g., one basic amino acid substituted for another basic amino acid) will still result in a protein having activity Y, whereas most non-conservative mutations in these domains will not result in a polypeptide having the recited activity. The specification also proposes that most mutations, conservative or non-conservative, outside the two domains will not affect activity Y to any great extent.”

Please contrast this example with the instant application, where there are, not two, but three conserved domains disclosed. See, for example, Table 1 on page 35, beginning with the last row on this page” 4...G922”, “1st SCR: 400-597”, “2nd SCR: 994-1203”, and “3rd SCR: 1213-1434”. The present specification also discloses numerous closely related polypeptide species, also found in Table 1 on page 35. Applicants describe how “A polypeptide sequence variant may have “conservative” changes, wherein a substituted amino acid has similar structural or chemical properties” on page 18, lines 4-6. Table 4 on pages 64-65 list conservative substitutions that might be made “when it is desired to maintain the activity of the protein” (page 64, lines 20-21). See also page 64, lines 4-6: “other conservative variations that alter one, or a few amino acids in the encoded polypeptide, can be made without altering the function of the polypeptide, these conservative variants are, likewise, a feature of the invention”. Applicants also indicate how “consensus sequences, can not only be used to define the sequences within each clade, but define the functions of these genes” (page 52, lines 24-25). “Deliberate amino acid substitutions may thus be made on the basis of similarity in polarity, charge, solubility, hydrophobicity, hydrophilicity, and/or the amphipathic nature of the residues, as long as a significant amount of the functional or biological activity of the transcription factor is retained” (page 18, lines 6-8), “Guidance in determining which and how many amino acid residues may be substituted, inserted or deleted without abolishing functional or biological activity may be found using computer programs well known in the art, for example,

DNASTAR software” (page 18, lines 17-20), and “Substitutions that are less conservative than those in Table 5 can be selected by picking residues that differ more significantly in their effect on maintaining (a) the structure of the polypeptide backbone in the area of the substitution, for example, as a sheet or helical conformation” (page 66, lines 3-5). “The mutations that are made in the polynucleotide encoding the transcription factor should not place the sequence out of reading frame and should not create complementary regions that could produce secondary mRNA structure. Preferably, the polypeptide encoded by the DNA performs the desired function” (page 64, lines 14-18).

In light of these amendments, arguments and experimental observations confirming Applicants’ disclosure and claims, Applicants request that the rejection under 35 U.S.C. §112, first paragraph, for lack of written description, be withdrawn.

Accordingly, Applicant respectfully requests that the rejection of the claims under 35 USC 112, first paragraph, for lack of written description, be withdrawn.

Item 12. Rejection under 35 USC 102 (b)

Applicant respectfully traverses the present rejection.

The Office action cites as a prior art reference Thomashow et al., US patent 5,065,705, taken with the evidence of Forugoux-Nicol et al. Applicant is understandably confused by this rejection for the following reasons:

US patent 5,065,705 is entitled “ System for preventing overheat of engine for vehicle”, which the Examiner must admit is unlikely to serve a ground for the present rejection. The rejection almost certainly intends to cite US patent 5,965,705, which is directed to overexpression of CBF proteins in plants. However, CBF is an AP2 transcription factor, and the instant claims are directed to SCARECROW family transcription factors. The latter is not closely related to the latter. There is no teaching of SCARECROW related genes in the Thomashow reference.

Furthermore, as this is a rejection under 35 USC 102 (b), Applicant believes that they conceived and constructively reduced to practice the claimed plants overexpressing G922, SEQ ID NO: 3 and 4, prior to the publication of the Thomashow patent in provisional application 60/125,814, as indicated above.

Accordingly, Applicant respectfully requests that the rejection of the claims under 35 USC 102(b) be withdrawn.

Item 14. Rejection under 35 USC 103 (a)

Applicant respectfully traverses the present rejection.

As indicated above, Applicant believes that they conceived and constructively reduced to practice the claimed plants overexpressing G922, SEQ ID NO: 3 and 4, prior to the publication of the Pysh reference in provisional application 60/125,814.

The sequence taught by Pysh is the same sequence as is found in the presently amended claims, since Pysh fails to teach a full length sequence that corresponds to SEQ ID NO: 4. Therefore, the reference cited in the Office action does not expressly anticipate or make obvious all of the elements of the claimed invention.

Furthermore, there is no teaching of transgenic plants in the Pysh reference, nor is there a motivation to produce transgenic plants in said reference. Mere disclosure of a sequence is insufficient grounds for establishing a prima facie case for obviousness. If that reasoning were to be held as a standard, the mere publication of a plant genome would preclude an inventor from obtaining any gene-based patent. This is, in fact, not the standard to which the courts or the USPTO adheres.


Accordingly, Applicant respectfully requests that the rejection of the claims under 35 USC 103(a) be withdrawn.

Application No: 10/714,887
Amendment dated June 11 2008
Reply to Restriction Requirement of December 11, 2007

CONCLUSION

Applicants believe that no additional fee is due with this communication. However, if the USPTO determines that an additional fee is due, the Commissioner is hereby authorized to charge Mendel Biotechnology, Inc. Deposit Account No. **50-1025**.

Respectfully submitted,
MENDEL BIOTECHNOLOGY, INC.



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FIG. 3A

SEQ ID
NOs added

pG912 (465)	S I S D H R S P V S D S S E C S P K L A S S C P K K R A G R	40	50	60
pG42 (469)	F G S D Y E S S V S S G G D Y I P T L A S S C P K K P A G R			
pG41 (467)	F G S D Y E S P V S S G G D Y S P K L A T S C P K K P A G R			
pG40 (471)	F G S D Y E P - - Q G G D Y C P T L A T S C P K K P A G R			
pG1090 (463)				
pG867 (461)	A K K S S V G N L Y R M G S G S S V V L D S E N G V E A E S			
pG3656-Maize (441)				
pG24 (443)	M E A E Q A A M A A P Q L G A A H Q Q T Q P R			
pG12 (445)	M E T E A A V T A T V T A A T M G - I G T R K R D L			
pG1379 (447)	M E T A T E V A T V V S T P A V T V A V A T R K R D -			
pG1277 (449)				
pG872 (431)	M E G G G V A D V A V P G T R K R D -			
pG2576 (473)	M D A G V A V K A D V A V K M K R E -			
pG3655-rice(jap) (435)				
pG3653-rice(jap) (437)	M S S P M E P V S F M Q K S A A A A D G G S A A Q A A A			
pG3652-rice(jap) (439)	L E L F E F C R H N S F L D L S L H F M Q A N G T S P A P -			
pG3654-rice(jap) (433)				
pG47 (2)				
pG3645-B_rapa (92)				
pG3646-B_oleracea (94)				
pG2133 (12)				
pG3647-Zinnia elegans (96)				
pG3648(partial)-Mt (453)				
pG3643-soy (88)				
pG3651-rice(jap) (100)				
pG3644-rice(jap) (90)				
pG3650(partial)-Zm (451)				
pG3649-rice(jap) (98)				
pG3657-rice(jap) (455)				
pG2294 (457)				
pG2115 (459)				

FIG. 3B

SEQ ID NO. added		70	80	90
pG912 (465)	K K - - - F R E T R H P I Y R G V R Q R N S G K W V C E V R			
pG42 (469)	K K - - - F R E T R H P I Y R G V R Q R N S G K W V C E V R			
pG41 (467)	K K - - - F R E T R H P I Y R G V R Q R N S G K W V C E V R			
pG40 (471)	K K - - - F R E T R H P I Y R G V R Q R N S G K W V C E V R			
pG1090 (463)	- - - - - R K L P S S K Y K G V P Q P N G R W G A Q I Y			
pG867 (461)	- - - - - R K L P S S K Y K G V P Q P N G R W G A Q I Y			
pG3656-Maize (441)	- - - - - R K L P S S K Y K G V P Q P N G R W G A Q I Y			
pG24 (443)	- - - - - R K L P S S K Y K G V P Q P N G R W G A Q I Y			
pG12 (445)	- - - - - R K L P S S K Y K G V P Q P N G R W G A Q I Y			
pG1379 (447)	- - - - - R K L P S S K Y K G V P Q P N G R W G A Q I Y			
pG1277 (449)	- - - - - R K L P S S K Y K G V P Q P N G R W G A Q I Y			
pG872 (431)	- - - - - R K L P S S K Y K G V P Q P N G R W G A Q I Y			
pG2576 (473)	- - - - - R K L P S S K Y K G V P Q P N G R W G A Q I Y			
pG3655-rice(jap) (435)	- - - - - R K L P S S K Y K G V P Q P N G R W G A Q I Y			
pG3653-rice(jap) (437)	- - - - - R K L P S S K Y K G V P Q P N G R W G A Q I Y			
pG3652-rice(jap) (439)	- - - - - R K L P S S K Y K G V P Q P N G R W G A Q I Y			
pG3654-rice(jap) (433)	- - - - - R K L P S S K Y K G V P Q P N G R W G A Q I Y			
pG47 (2)	- - - - - R K L P S S K Y K G V P Q P N G R W G A Q I Y			
pG3645-B_rapa (92)	- - - - - R K L P S S K Y K G V P Q P N G R W G A Q I Y			
pG3646-B_oleracea (94)	- - - - - R K L P S S K Y K G V P Q P N G R W G A Q I Y			
pG2133 (12)	- - - - - R K L P S S K Y K G V P Q P N G R W G A Q I Y			
pG3647-Zinnia elegans (96)	- - - - - R K L P S S K Y K G V P Q P N G R W G A Q I Y			
pG3648(partial)- Mt (453)	- - - - - R K L P S S K Y K G V P Q P N G R W G A Q I Y			
pG3643-soy (88)	- - - - - R K L P S S K Y K G V P Q P N G R W G A Q I Y			
pG3651-rice(jap) (100)	- - - - - R K L P S S K Y K G V P Q P N G R W G A Q I Y			
pG3644-rice(jap) (90)	- - - - - R K L P S S K Y K G V P Q P N G R W G A Q I Y			
pG3650(partial)- Zm (451)	- - - - - R K L P S S K Y K G V P Q P N G R W G A Q I Y			
pG3649-rice(jap) (98)	- - - - - R K L P S S K Y K G V P Q P N G R W G A Q I Y			
pG3657-rice(jap) (455)	V T T A A A A L A V R P Y K G V R R R S W G S W V S E I R			
pG2294 (457)	- - - - - S I R M K K Y K G V R R M R S W G S W V S E I R			
pG2115 (459)	S C K N K N K S K I K . Y K G V R R . W G K W V S E I R			
(675) (676)				

FIG. 3C

ANNOTATED SHEET SHOWING CHANGES

SEQ ID
NOs: added

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FIG. 3D

SEQ ID

SEQ ID
NUM added

pG912 (465) R G R S - - - - -
 pG42 (469) R G R S - - - - -
 pG41 (467) R G R S - - - - -
 pG40 (471) R G R S - - - - -
 pG1090 (463) R G R G - - - - -
 pG867 (461) R R R D - - - - -
 pG3656-Maize (441) P G P S - - - - -
 pG24 (443) R G P S - - - - -
 pG12 (445) R G P S - - - - -
 pG1379 (447) R G P T - - - - -
 pG1277 (449) R G P T - - - - -
 pG872 (431) R G G - D - - - -
 pG2576 (473) R G N - N - - - -
 pG3655-rice(jap) (435) R G V - Q A - - - -
 pG3653-rice(jap) (437) R G G - E A - - - -
 pG3652-rice(jap) (439) R G G - E A - - - -
 pG3654-rice(jap) (433) R G G E A A - - - -
 pG47 (2) H Q P D S L - - - - -
 pG3645-B_rapa (92) H Q P N S L - - - - -
 pG3646-B_oleracea (94) H R P S S L D - - - -
 pG2133 (12) H R P S S L D - - - -
 pG3647-Zinnia_elegans (96) K G N T S F - - - - -
 pG3648(partial)-Mt (453) K R P S T L - - - - -
 pG3643-soy (88) S R P S S L - - - - -
 pG3651-rice(jap) (100) R G G A G D - - - - -
 pG3644-rice(jap) (90) R G G A G D - - - - -
 pG3650(partial)-Zm (451) R G C A G - - - - -
 pG3649-rice(jap) (98) R L G G R R A A G G G
 pG3657-rice(jap) (455) K G S - - - - -
 pG2294 (457) K G S - - - - -
 pG2115 (459) K G P - - - - -
 R G

N/Os: added
 ↳

130
 140
 150

FIG. 3E

FIG. 3F

FIG. 3G

SEQ ID
NOs: added

pG912 (465)	- T A A E A E A A G E G - - V R E G E R R A E E - - - - Q	220	230	240
pG42 (469)	- H G F D M E E T L V E A - - I Y T A E - - - - Q			
pG41 (467)	- H G L D M E E T L V E A - - I Y T P E - - - - Q			
pG40 (471)	- H G L D M E E T M V E A - - I Y T P E - - - - Q			
pG1090 (463)	- S G Q G L S R V G L S P - - - D Q - - - - I Q			
pG867 (461)	T T G F R S A E A L F E K A V T P S D V G K L N R L V I P K			
pG3656-Maize (441)	- H H R E R H R H H N - - - - - - - - - -			
pG24 (443)	- - - - - T G G - - - - E N R G D Y - - - - -			
pG12 (445)	- H H H H H Q H Q R G N H D Y V D N H S D Y R I - - - - N			
pG1379 (447)	- R H R V F G Q N R D S D - - V D N K N F H R N Y Q N G E R			
pG1277 (449)	- R R R V F S Q K R D - - - - - - - - - -			
pG872 (431)	V P G S E I R P E S - - - - - P S T S - - - - A			
pG2576 (473)	- A G Y E I R Q E S - - - - - A S T S - - - - M			
pG3655-rice(jap) (435)	- P A Q V A T E E - - - - - - - - - -			
pG3653-rice(jap) (437)	- - - - - - - - - - - - - - - -			
pG3652-rice(jap) (439)	- E A H S F K E E E A Q - - V E E K T - - - - A			
pG3654-rice(jap) (433)	- S A L P W E E A P V V A - - A Q E A A - - - - A			
pG47 (2)	- - - T S V N S G C G D T - - T T Y Y E - - - - N			
pG3645-B_rapa (92)	- D H A S G N S G N G D T - - T T A Y C - - - - E			
pG3646-B_oleracea (94)	- D S A S G G V E E G - - - - - T - - - - E			
pG2133 (12)	- S - G S G G C E E R S S - M A N M E - - - - E			
pG3647-Zinnia_elegans (96)	- D T T P T N E A L N - - - - - - - - - -			
pG3648(partial)-Mt (453)	- K T S T V G A E T N C E - - S D E R T - - - - S			
pG3643-soy (88)	- D P A R - P A P A T A Y - - A R P D H - - - - C			
pG3651-rice(jap) (100)	- D A A P A P A P A T A Y - - A R P D H - - - - C			
pG3644-rice(jap) (90)	- A A L A S P P P V V Q P - - A - - A - - - - L			
pG3650(partial)-Zm (451)	- R D H P - P A A A A A S - - S S G S G - - - - V			
pG3649-rice(jap) (98)	E A M S S T P T S G A T S - - L S T L G - - - - S			
pG3657-rice(jap) (455)	S V S T S S P L L S S - P - - S E D L Y - - - - D			
pG2294 (457)	S S A V S S P S D H D H H - - H D D G M - - - - Q			
pG2115 (459)				

FIG. 3H

ANNOTATED SHEET SHOWING CHANGES

SEQ ID
NOs: added

SEQ ID NOs: added	280			290			300		
pG912 (465)	-	-	N F F E N M A E G M L L P	-	-	-	-	-	-
pG42 (469)	-	-	S L A N M A E G M L L P	-	-	-	-	-	-
pG41 (467)	-	-	S L L D N M A E G M L L P	-	-	-	-	-	-
pG40 (471)	-	-	T L L D N M A E G M L L P	-	-	-	-	-	-
pG1090 (463)	-	-	M G W M Q D L E V A D Y E E L Y	-	-	-	-	-	-
pG867 (461)	W R F R Y S Y W N S S Q S Y V L T K G W S R F V K	-	-	-	-	-	-	-	-
pG3656-Maize (441)	-	-	- R V H A E E Q Q E E E E	-	-	-	-	-	-
pG24 (443)	-	-	- K S G N G S L E R V D L	-	-	-	-	-	-
pG12 (445)	-	-	- K R C N G S L E R V D L	-	-	-	-	-	-
pG1379 (447)	-	-	- R S G G R L L D R V D L	-	-	-	-	-	-
pG1277 (449)	-	-	- - F G G G L L E L V D L	-	-	-	-	-	-
pG872 (431)	-	-	N F G F D S F S D D F S G F S	-	-	-	-	-	G G
pG2576 (473)	-	-	F P G F D D F S D E Y S G D R	-	-	-	-	-	F R
pG3655-rice(jap) (435)	-	-	A A G S L D W S Q F M A N P P M Y S P T A T A G S Q	-	-	-	-	-	-
pG3653-rice(jap) (437)	-	-	S G G G D G	-	-	-	-	-	-
pG3652-rice(jap) (439)	-	-	A G G S F F D W S Q L P L Y S P	-	-	-	-	-	-
pG3654-rice(jap) (433)	-	-	A G S F E Y W S Q Q P L Y S P	-	-	-	T A A S L D L Q	-	-
pG47 (2)	-	-	- - - - - E	-	-	-	-	-	-
pG3645-B_rapa (92)	-	-	- - - - -	-	-	-	-	-	-
pG3646-B_oleracea (94)	-	-	- - - - -	-	-	-	-	-	-
pG2133 (12)	-	-	- - - - -	-	-	-	-	-	-
pG3647-Zinnia_elegans (96)	-	-	- - - - -	-	-	-	-	-	-
pG3648(partial)-Mt (453)	-	-	- - - - -	-	-	-	-	-	-
pG3643-soy (88)	-	-	W H G S G G D S T E R D	-	-	-	-	-	-
pG3651-rice(jap) (100)	-	-	A H A A G A N A R T S G	-	-	-	-	-	-
pG3644-rice(jap) (90)	-	-	A H A A G A N A R T S G	-	-	-	-	-	-
pG3650(partial)-Zm (451)	-	-	R A G A A K Q R R W Q Q	-	-	-	-	-	-
pG3649-rice(jap) (98)	-	-	N G E D G S R S R S S G	-	-	-	-	-	-
pG3657-rice(jap) (455)	D H E L W T E L D A F A S P K F M D	-	-	-	-	-	-	-	-
pG2294 (457)	-	-	D Q F M F I N G V S A P Y	-	-	-	-	-	-
pG2115 (459)	-	-	M F L F F D N G A P F N Y S P	-	-	-	-	-	-

FIG. 3J

ANNOTATED SHEET SHOWING CHANGES

SEQ ID
Nos. added

pG912 (465)

pG42 (469)

pG41 (467)

pG40 (471)

pG1090 (463)

pG867 (461)

pG3656-Maize (441)

pG24 (443)

pG12 (445)

pG1379 (447)

pG1277 (449)

pG872 (431)

pG2576 (473)

pG3655-rice(jap) (435)

pG3653-rice(jap) (437)

pG3652-rice(jap) (439)

pG3654-rice(jap) (433)

pG47 (2)

pG3645-B_rapa (92)

pG3646-B_oleracea (94)

pG2133 (12)

pG3647-Zinnia_elegans (96)

pG3648(partial)- Mt (453)

pG3643-soy (88)

pG3651-rice(jap) (100)

pG3644-rice(jap) (90)

pG3650(partial)- Zm (451)

pG3649-rice(jap) (98)

pG3657-rice(jap) (455)

pG2294 (457)

pG2115 (459)

310

- - - P P E V G W N H N - D F D G V - - G D - - - V S L W S

- - - L P S V Q W N H N H E V D G D - - D D D - - V S L W S

- - - S P S V Q W N Y N F D V E G D - - D D - - V S L W S

- - - P P S V Q W N H N Y D G E G D - - G D - - - V S L W S

- - - G Q F F G Q H D R D E - F F - - E M Q Q F Q S I W K

- - - E K N L R A G D V V S F S R S N G Q D Q Q L Y I G W K

- - - Q K P Q R P A W S G R - - - V K N P D L

- - - N K L P D P E N S D G - - - D D D E C V K R R

- - - N K L P D P E T S D - - - D D

- - - N K L P D P E S S D - - - E E W E S K H

- - - N K L P D P E N L D - - - D D L V G K

- - - D R F T E I L P I E D Y G G E S - - - L L D E S L I L W D

- - - E Q L S P T Q D Y Y Q L G E E T - - - Y A D G S M F L W N

- - - A M W P V T A E A D G E D - - - D E L A T T C R W S

- - - T T T P A A E H W E E D N V - - E G T T S D N L W S

- - - R W M T A A A A E E S I M E D D D - - D E G T S D G L W S

- - - P L N I S V Y D Y L G G - - - H D H V

- - - A L N I S V Y D Y L D G - - - H D H V

- - - L N I S V Y D Y L D - - - D G R I

- - - L S I S V Y D Y L E - - - D D L V

- - - I S V D D Y L

- - - A L S I S I E D Y L

- - - E R Q L V C A E E I S V - - - D D M E I L M

- - - E R Q L V C A E E I S V - - - D D M E I L M

- - - Q Y V L V H A E Q G L S V - - - D D M E I L M

- - - S E E L I V Y E G L S V - - - E D G E L M R L W S

- - - L M A G G T A F S S P W E E P - E - - G D - - I R L W N

- - - L T T T S L S D D F F E - - - A D - - I P L W S

- - - Q L N S T T M L D E Y F Y E - - - A D - - I P L W S

320

330

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FIG. 3K

SEQ ID NOs added		340	350	360
pG912 (465)	F D E			
pG42 (469)	Y			
pG41 (467)	Y			
pG40 (471)	Y			
pG1090 (463)	S N N			
pG867 (461)	S R S G S D L D A G R V L R L F G V N I S P E S S R N D V V			
pG3656-Maize (441)				
pG24 (443)				
pG12 (445)				
pG1379 (447)				
pG1277 (449)				
pG872 (431)	F			
pG2576 (473)	F			
pG3655-rice(jap)(435)	F D A			
pG3653-rice(jap)(437)				
pG3652-rice(jap)(439)	F D F			
pG3654-rice(jap)(433)	F H Y S P T R S K W			
pG47 (2)				
pG3645-B_rapa (92)				
pG3646-B_oleracea (94)				
pG2133 (12)				
pG3647-Zinnia_elegans (96)				
pG3648(partial)-Medicago(453)				
pG3643-soy (88)				
pG3651-rice(jap)(100)				
pG3644-rice(jap)(90)				
pG3650(partial)-Maize (451)				
pG3649-rice(jap)(98)				
pG3657-rice(jap)(455)	F C			
pG2294 (457)	F C			
pG2115 (459)	F N			

FIG. 3L

SEQ ID No. added	370	380	390
pG912 (465)	G N K R V N D T E M L S L V C S K K Q R I F H A S		
pG42 (469)			
pG41 (467)			
pG40 (471)			
pG1090 (463)			
pG867 (461)			
pG3656-Maize (441)			
pG24 (443)			
pG12 (445)			
pG1379 (447)			
pG1277 (449)			
pG872 (431)			
pG2576 (473)			
pG3655-rice(jap) (435)			
pG3653-rice(jap) (437)			
pG3652-rice(jap) (439)			
pG3654-rice(jap) (433)			
pG47 (2)			
pG3645-B_rapa (92)			
pG3646-B_oleracea (94)			
pG2133 (12)			
pG3647-Zinnia_elegans (96)			
pG3648(partial)-Medicago (453)			
pG3643-soy (88)			
pG3651-rice(jap) (100)			
pG3644-rice(jap) (90)			
pG3650(partial)-Maize (451)			
pG3649-rice(jap) (98)			
pG3657-rice(jap) (455)			
pG2294 (457)			
pG2115 (459)			

FIG. 3M

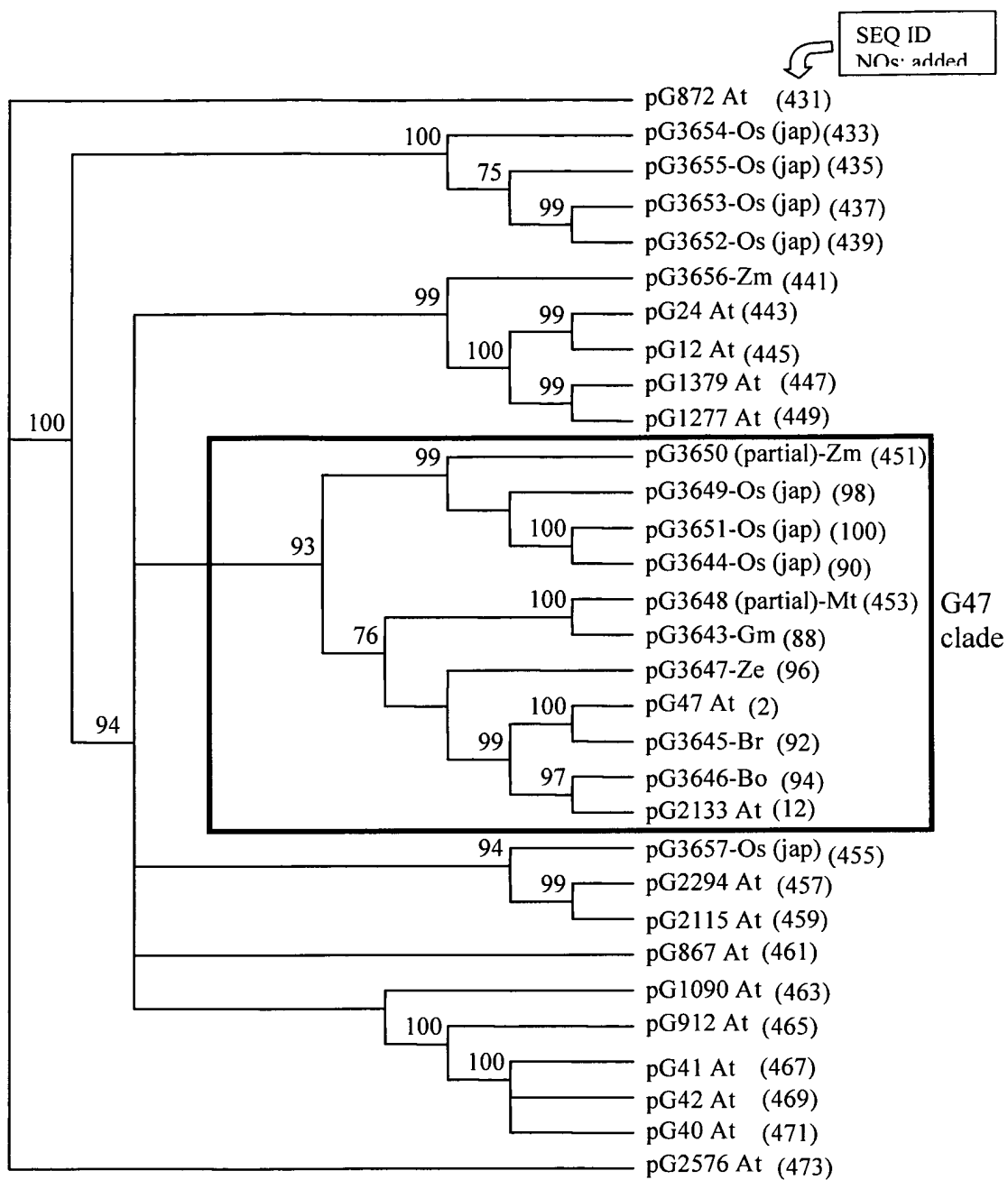


FIG. 4

SEQ ID
NOs: added

pG912-AP2dom (466)
 pG42-AP2dom (470)
 pG41-AP2dom (468)
 pG40-AP2dom (472)
 pG867-AP2dom (462)
 pG8-AP2dom2 (476)
 pG2-AP2dom1 (478)
 pG2-AP2dom1 (475)
 pG2-AP2dom1 (477)
 pG1090-AP2dom (464)
 pG3656-AP2dom_maize (464)
 pG24-AP2dom (444)
 pG12-AP2dom (446)
 pG1379-AP2dom (448)
 pG1277-AP2dom (450)
 pG872_AP2dom (432)
 pG2576-AP2dom (474)
 pG3655-AP2dom_rice[ja] (467)
 pG3653-AP2dom_rice[ja] (467)
 pG3652-AP2dom_rice[ja] (467)
 pG3654-AP2dom_rice[ja] (467)
 pG47_AP2dom(667)
 pG3645-AP2dom_B_rap (467)
 pG3646-AP2dom_B_olea (467)
 pG2133-AP2dom(670)
 pG3648-AP2dom(M.trunc (467)
 pG3643-AP2dom_soyk7 (467)
 pG3647-AP2domZ_rice[ja] (467)
 pG3651-AP2dom_rice[ja] (467)
 pG3644-AP2dom_rice[ja] (467)
 pG3650-AP2dom_maize (467)
 pG3649-AP2dom_rice[ja] (467)
 pG3657-AP2dom_rice[ja] (467)
 pG2294-AP2dom (458)
 pG2115_-AP2dom(460)
 (675) (676) (680)

[illegible]

Fig. 5

SEQ ID NOs added		10	20	30
pG3002	(68)			
pG3680	(114)			
pG2991	(48)			
pG2990	(46)			
pG2989	(44)			
pG2995	(56)			
pG2992	(50)			
pG3000	(64)			
pG3663	(102)			
pG2998	(62)			
pG3692	(124)			
pG2999	(14)			
pG2994	(54)			
pG2993	(52)			
pG3683	(116)			
pG2996	(58)			
pG3668	(104)			
pG3671	(108)			
pG3674	(110)			
pG3670	(106)			
pG3675	(112)			
pG2997	(60)			
pG3690	(122)			
pG3694	(126)			
pG3685	(118)			
pG3686	(120)			
pG3695	(128)			
pG3001	(66)			
		M E Y K R S S H V E E E E E E E D D E E E D E E E Q Q G		

FIG. 8A

SEQ ID
NOs: added



pG3002 (68)
pG3680 (114)
pG2991 (48)
pG2990 (46)
pG2989 (44)
pG2995 (56)
pG2992 (50)
pG3000 (64)
pG3663 (102)
pG2998 (62)
pG3692 (124)
pG2999 (14)
pG2994 (54)
pG2993 (52)
pG3683 (116)
pG2996 (58)
pG3668 (104)
pG3671 (108)
pG3674 (110)
pG3670 (106)
pG3675 (112)
pG2997 (60)
pG3690 (122)
pG3694 (126)
pG3685 (118)
pG3686 (120)
pG3695 (128)
pG3001 (66)

60

50

40

H H Q Y T T A A A Q Q Q L H P Q V L G S S A S S P S S L M D

FIG. 8B

SEQ ID NOs: added		70	80	90
pG3002	(68)			
pG3680_	(114)			
pG2991	(48)			
pG2990	(46)			
pG2989	(44)			
pG2995	(56)			
pG2992	(50)			
pG3000	(64)			
pG3663_	(102)			
pG2998	(62)			
pG3692_	(124)			
pG2999	(14)			
pG2994	(54)			
pG2993	(52)			
pG3683_	(116)			
pG2996	(58)			
pG3668_	(104)			
pG3671_	(108)			
pG3674_	(110)			
pG3670_	(106)			
pG3675_	(112)			
pG2997	(60)			
pG3690_	(122)			
pG3694_	(126)			
pG3685_	(118)			
pG3686_	(120)			
pG3695_	(128)			
pG3001	(66)			
		S A A F S R P L L P P N L S L V S P S A A A A A P G G S Y		

FIG. 8C

FIG. 8D

FIG. 8E

SEQ ID Nos. added		160	170	180
pG3002_	(68)			
pG3680_	(114)		M E A M D V K Y K P V M F P N G A G L K K	
pG2991_	(48)	P I R I - - - - -	Q P A K P I S F S N G K R C H H	
pG2990_	(46)	P T R I - - - - -	Q P A K P I S F S N G I I K R H	
pG2989_	(44)	P T R I - - - - -	Q P A K P I S F S N G I I K R H	
pG2995_	(56)	- - - - -	Q F L S P T T N N Q D T - G R E	
pG2992_	(50)	- - - - -	Q L L N S L P I A G - - - - -	
pG3000_	(64)	E A K P - - - - -	E S D P S M A L F P I K - - - K	
pG3663_	(102)	H N H H H I Y T P S S T S P P L P P N S V Q L Q Q P T R		
pG2998_	(62)	N T R V - - - - -	S C N - - S Q T L D H H Q S K S P S S F S	
pG3692_	(124)			M
pG2999_	(14)	D P D P - - - - -	L D T N P I S I S H A P R S Y A	
pG2994_	(54)	T T Q P P M P L H G N G H G N N Y D H H H Q D P H H V G		
pG2993_	(52)	T S N P L L V S S N S N G L G K N H D H S H H H V G Y N I		
pG3683_	(116)	G M N G - - - - -	R H M S P P T P P A A E E S K A V V V	
pG2996_	(58)	L P K A S - - - - -	T E S H E T T G T T S T G G G G G F M V	
pG3668_	(104)	R K S G - - - - -	- - - - - G G - - - -	
pG3671_	(108)	A G G G - - - - -	M A P K P P G E I G S R V K G P - - - -	
pG3674_	(110)	G G G G - - - - -	G V P K P G G G V G G G G G - - - -	
pG3670_	(106)	R S K I - - - - -	A E V S A P V I G R K G G S F T - - - -	
pG3675_	(112)	T S - - - - -	S G - - - G G G G G S R - - - -	
pG2997_	(60)	T S - - - - -	S G - - - G G V G R S - - - -	
pG3690_	(122)	L A L V - - - - -	G G G G G P R G G E G - - - -	
pG3694_	(126)			
pG3685_	(118)	- - - - -	S S S P A A S A S A G - - - -	
pG3686_	(120)	- - - - -	- - - T P P H R V L T S - - - -	
pG3695_	(128)		M M D H L S L V P Y E G G S - - - -	
pG3001_	(66)	K P - - - - -	- - - K P T R T H H A P P P I L D S I	

FIG. 8F

SEQ ID NOs added	190	200	210
pG3002 (68)	M Q S T - - - C V	Y R E C M R N H A A	K L G S Y A
pG3680_ (114)	P K P A A V A L A G E P L	Y R E C L K N H A A	S L G G H A
pG2991 (48)	H H L A S E A V - - A V A	T Y K E C L K N H A A	G I G G H A
pG2990 (46)	H H H H H P - - - L L F T	T Y K E C L K N H A A	A L G G H A
pG2989 (44)	H H H H H N N - - - N K V	T Y K E C L K N H A A	A I G G H A
pG2995 (56)	Q T I A C A R D - - M V V	L Y N E C L K N H A A	S L G G H A
pG2992 (50)	- E L T V T G E - - M G V	C Y K E C L K N H A A	N L G G H A
pG3000 (64)	E N Q K P K T R V D Q G	A K Y R E C Q K N H A A	S T G G H V
pG3663_ (102)	D P D P S S S - S L L	I R Y R E C L R N H A A	R L G S H V
pG2998 (62)	I S A A A K P - - - T V R	Y R E C L K N H A A	S V G G S V
pG3692_ (124)	E Q Q Q E R P R - - - E V	Y R E C M R N H A A	K L G T Y A
pG2999 (14)	R P Q T T S P G - - - K A	R Y R E C Q K N H A A	S G G H V
pG2994 (54)	Y N A I I K K P - - - M I	K Y K E C L K N H A A	A M G G N A
pG2993 (52)	M V T N I K K E K P V	I K Y K E C L K N H A A	T M G G N A
pG3683_ (116)	V S S A T A A - - - A R	Y R E C L K N H A A	A I G G S A
pG2996 (58)	V H G G G S R - - - F R	F R E C L K N Q A V	N I G G H A
pG3668_ (104)	- G G G G - - - Y R	Y K E C L K N H A V	G I G G Q A
pG3671_ (108)	- S C G G G - - - R Y	R E C L K N H A V	G I G G H A
pG3674_ (110)	- G G G G G G - - - A R	Y R E C L K N H A V	G I G G H A
pG3670_ (106)	- P P V A G V - - - V R	Y R E C Q K N H A V	S F G G H A
pG3675_ (112)	- K T V G G S K - - - V R	Y R E C L K N H A V	N I G G H A
pG2997 (60)	- K G V G - A K - - - I R	Y R E C L K N H A V	N I G G H A
pG3690_ (122)	- A A G E A P T - - - W R	Y R E C L K N H A A	R M G A H V
pG3694_ (126)	- N G A G A A E - - - V R	Y H E C L R N H A A	M G A H V
pG3685_ (118)	- A A P E T I R - - - C R	Y H E C L R N H A A	A M G G H V
pG3686_ (120)	- A G G G G G - - - G K	Y K E C M R N H A A	A S G G H V
pG3695_ (128)	F K V T H K P - - - - H	Y Y E C R K N H A A	D I G T T A
pG3001 (66)	.	.	.
(681) (682)	.	Y R E C L K N H A A	. G G H A

FIG. 8G

SEQ ID No. added	220	230	240
pG3002 (68)	I D G C R E Y S Q P S	T G D L C V A C G C H R	
pG3680 (114)	V D G C G E F M P S P G A N P	L K C A A C G C H R	
pG2991 (48)	L D G C G E F M P S P S N D P A S	L T C A A C G C H R	
pG2990 (46)	L D G C G E F M P S P S I S S D P T S	L K C A A C G C H R	
pG2989 (44)	L D G C G E F M P S P S S T P S D P T S	L K C A A C G C H R	
pG2995 (56)	L D G C G E F M P S P S T T I L T D P P S	L R C D A C G C H R	
pG2992 (50)	L D G C G E F M P S P T A T S T D P S S	L R C A A C G C H R	
pG3000 (64)	V D G C C E F M A G G E - - E G T L G A	L K C A A C N C H R	
pG3663 (102)	T D G C G E F M P N G E - - Q G T P E S	L I C A A C E C H R	
pG2998 (62)	H D G C G E F M P S G E - - E G T I E A	L R C A A C D C H R	
pG3692 (124)	N D G C C E Y T P D D - - - G H P A G L	L C A A C G C H R	
pG2999 (14)	V D G C G E F M S S G E - - E G T V E S	L C A A C D C H R	
pG2994 (54)	T D G C G E F M P S G E - - D G S I E A	L T C A C N C H R	
pG2993 (52)	I D G C G E F M P S G E - - E G S I E A	L T C S V C N C H R	
pG3683 (116)	T D G C G E F M P G G E - - E G S L D A	L R C S A C G C H R	
pG2996 (58)	V D G C G E F M P A G I - - E G T I D A	L K C A A C G C H R	
pG3668 (104)	V D G C G E F M A A G D - - E G T L D A	L K C A A C N C H R	
pG3671 (108)	V D G C G E F M A A G E - - E G T I D A	L R C A A C N C H R	
pG3674 (110)	V D G C G E F M A S G E - - E G S I D A	L R C A A C G C H R	
pG3670 (106)	V D G C C E F M A A G D - - E G T L E A	V I C A A C N C H R	
pG3675 (112)	V D G C C E F M P S G E - - D G S L D A	L K C A A C G C H R	
pG2997 (60)	V D G C C E F M P S G E - - D G T L D A	L K C A A C G C H R	
pG3690 (122)	L D G C G E F M S S P G - - D - G A A A	L A C A A C G C H R	
pG3694 (126)	L D G C G E F M S S P G - - D - G A A A	L A C A A C G C H R	
pG3685 (118)	V D G C R E F M P M P G - - D - A A D A	L K C A A C G C H R	
pG3686 (120)	V D G C G E F M P A S - - - T E E P L A	C A A C G C H R	
pG3695 (128)	F D G C G E Y M P A S - - - - P D S L K	C A A C G C H R	
pG3001 (66)	Y D G C G E F V S S T G - - - E E D S L	N C A A C G C H R	
(683) (684)	D G C G E F M P S	G . . . A L . C A A C G C H R	

FIG. 8H

ANNOTATED SHEET SHOWING CHANGES

SEQ ID
Nos. added

</

FIG. 8I

ANNOTATED SHEET SHOWING CHANGES

SEQ ID
NOS. added

</

FIG. 8J

	SEQ ID NOs added	310	320	330
pG3002	(68)	- - - - -	- - - - -	- - - - -
pG3680_1	(114)	E Y D E E R S V S P P P P P	P Q - - - I N H T R F P F T S L R R	
pG2991	(48)	P H N R H Q L P P P P P P P	P P H H L L P A P V A Q Q P P P P S	
pG2990	(46)	P H H R H H P P P P P P P P	P P H L A G I R S P D D D S A S P P	
pG2989	(44)	P H H R H H P P P P P P P P	P P P P - - R S P N - - S A S P P	
pG2995	(56)	G F S Q H R S P P S P L Q L Q P	P P L P - - R S P N - - S S S P P	
pG2992	(50)	P P S R H V S S P V P C S Y Y T	- - L A P V - - - P N L L L	
pG3000	(64)	D H Q L M I T P A F Y S S N S S Y K P R V M H P T G E I G R	- - S A P P - - - H H V I L	
pG3663_1	(102)	S N Y H H N K S N G Q N R I H P S S L H H K H G F S S S P G	S S Y K P R V M H P T G E I G R	
pG2998	(62)	N M M L N P L M L P P P P P	N Y Q P I H H H K Y G M S P P G G	
pG3692_1	(124)	R A T A A G G A G G A G V G V	G V A P M L P A P G G G P P G	
pG2999	(14)	- - - - -	- - - - -	- - - - -
pG2994	(54)	- - - - -	- - - - -	- - - - -
pG2993	(52)	- - - - -	- - - - -	- - - - -
pG3683_1	(116)	H H H H Q L L G V G A H P	Q R K L M F H H K M I K S P L P	
pG2996	(58)	P Q H Q P P P P P P P P P P	P R G H G H H H L L V A A L P P	
pG3668_1	(104)	- Q Y I T A T P Y Y H H H R P T G Y L H M K P P S S L H	Y R L P A P V S Y R P P P S Q A P P	
pG3671_1	(108)	P Y Y R T P A G Y L H H H Q H H M A A A A A A A A A A G	P T G Y L H M K P P P S S L H	
pG3674_1	(110)	P Y Y R T P A G Y L H H H Q H H M A A A A A A A A A A G	P T G Y L H M K P P P S S L H	
pG3670_1	(106)	P Y Y H R G P Q H H A A S G Y L H H H L T T S P A A A G	P T G Y L H M K P P P S S L H	
pG3675_1	(112)	T Y Y N R P P Q - L P P P P	G - - - Y L H L T S P A A G Q	
pG2997	(60)	T Y Y N R P P Q P H Q P P P	G - - - Y L H L T S P A A P - -	
pG3690_1	(122)	A T P T G A N S S R L M P P L L	L A P P H M Q K R P P V L P V	
pG3694_1	(126)	A T P T G A N S S R L M P P L L	L A P P H M Q K R P P V L P V	
pG3685_1	(118)	P P T P R V P L L M P P P P	Q P P H P H P Q H P Y L H P P F	
pG3686_1	(120)	S I N S R A P P A L L L P P	- - - - P A A A S K Q G L P F	
pG3695_1	(128)	P H S H A A L Q G F L P	S S V P A P P P Q L A L P Y H	
pG3001	(66)	- V T E T V L E V L K I S S C Q	F R R I F C S P Y G G K S	

FIG. 8K

ANNOTATED SHEET SHOWING CHANGES

	SEQ ID N ₀ c: added	340	350	360
pG3002	(68)	V K Q L A R L K W K T A E E R N - - - - - E E E E D D T E		
pG3680_	(114)	Y F P T A P H M V L S L G S G V P G P A V A V S P A Q R L A		
pG2991	(48)	P I S S S Y M L L A L S G - - - - - G R G - - - - -		
pG2990	(46)	P I S S S Y M L L S L S G T N N N N N L A S F S D L N F S S		
pG2989	(44)	P I S S S Y M L L A L S G - - - - - N N K T A P F S D L N F A		
pG2995	(56)	S L S S G F F G P S D Q E - - - - - V K - - N K F		
pG2992	(50)	S L S S G F F G P S D Q - - - - - - - - - - D P T		
pG3000	(64)	R T S S S E D M K K I L S H R - - - - - N Q N V D G K		
pG3663_	(102)	- - - L M M G F G G G S G G P - - - - - A A E S S S E D L N		
pG2998	(62)	G M V T P M S V A Y G G G G - - - - - G A E S S S E D L N		
pG3692_	(124)	Y M H M A M G G A V G G G G - - - - - V D G G G G		
pG2999	(14)	S R H V S P I M M S F G G G G G C - - - - - A A E S S T E D L N		
pG2994	(54)	H Q M I M P I G V S N Y R Y M H N - - - - - N S E S E D F M E E		
pG2993	(52)	Q Q M I M P I G V T T A G - - S - - - - N S E S E D L M E E		
pG3683_	(116)	- - - P T R M V M P L S A M H T S - - - - - E S D D A A		
pG2996	(58)	- - - L Q L A L P P P Q R E R - - - - - S E D P M E T		
pG3668	(104)	- - - Q R Q L A L P S T S R - - - - - D D L D E I S N		
pG3671_	(108)	- Y P Q R P L A L P S T S H S G R D - - D G D D L S G M V G		
pG3674_	(110)	G Y P Q R P L A L P S T S H S G R D - - E G D D M S G M V G		
pG3670_	(106)	- - - - P L A L P P A T S G G G - - - F S R E E E D M S N		
pG3675_	(112)	- - - - P Y K P P A A S G D - - - - - E E D T S N		
pG2997	(60)	- - - - Y R P P A A S G D - - - - - E E D T S N		
pG3690_	(122)	S P A S A P A A L A E S S S E E L R P P P L P S S H P H A H		
pG3694_	(126)	S P A S A P A A L A E S S S E E L R P P P L P S S H P H A H		
pG3685_	(118)	P Y H H T P S G S G G T T T E - - - - - S S S E E R G P		
pG3686_	(120)	P G Y G T P S G G T G T T T A - - - - - S S S D E R L R		
pG3695_	(128)	A V P A A A W H H A A A A A G R A G S E T P P R M D D F G		
pG3001	(66)	E G K K K K E K E S Y G G D - - - - - P I I K D R F G		

FIG. 8L

ANNOTATED SHEET 1 SHOWING CHANGES

pG3002	(68)	SEQ ID NOs: added	370										380										390												
			E	T	S	T	E	E	K	M	T	-	-	-	-	-	-	-	-	-	-	V	Q	R	R	R	R	K	S	-	-	-	-		
pG3680	(114)		P	T	Q	L	T	P	S	S	A	P	P	-	-	-	-	-	-	-	-	H	A	G	G	A	M	P	P	R	K	R	F	R	T
pG2991	(48)		-	G	A	N	T	A	V	P	M	S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
pG2990	(46)		A	G	N	N	H	H	H	Q	H	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
pG2989	(44)		A	A	A	N	H	L	S	A	T	P	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
pG2995	(56)		T	V	E	R	D	V	R	K	T	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
pG2992	(50)		V	V	R	S	E	N	S	S	R	G	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
pG3000	(64)		S	L	M	M	M	M	R	K	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
pG3663	(102)		M	F	H	Q	S	N	D	G	G	Q	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
pG2998	(62)		L	Y	G	Q	S	S	G	E	G	A	G	A	A	G	Q	M	A	F	S	M	S	S	S	S	S	S	S	S	S	S	S	S	
pG3692	(124)		S	G	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
pG2999	(14)		K	F	H	Q	S	F	S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
pG2994	(54)		D	G	V	T	T	A	S	R	S	L	P	N	L	P	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
pG2993	(52)		E	G	G	S	L	T	F	R	Q	P	P	P	P	P	S	P	Y	S	Y	G	H	N	Q	Q	Q	Q	Q	Q	Q	Q	Q	Q	
pG3683	(116)		A	R	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
pG2996	(58)		S	S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
pG3668	(104)		P	S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
pG3671	(108)		P	M	S	A	V	G	P	L	S	G	M	S	L	G	A	G	-	P	S	G	S	G	S	G	S	G	S	G	S	G	S	G	S
pG3674	(110)		P	M	-	V	I	G	P	M	V	G	M	S	L	G	S	A	G	P	S	G	S	G	S	G	S	G	S	G	S	G	S	G	S
pG3670	(106)		P	S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
pG3675	(112)		P	S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
pG2997	(60)		P	S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
pG3690	(122)		A	A	A	V	V	A	A	S	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
pG3694	(126)		A	A	A	V	V	A	A	S	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
pG3685	(118)		P	S	S	S	A	A	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
pG3686	(120)		P	S	P	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
pG3695	(128)		P	G	S	A	G	G	S	G	S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
pG3001	(66)		G	A	E	E	E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	(686)																																		

FIG. 8M

pG3002	(68)	SEQ ID NOs. added		400		410		420	
pG3002	(68)	K F T		A E Q R E A M		K D Y A K L G W T L K D K R		- - - A	
pG3680	(114)	K F T A		E Q K Q R M		L S E R L G W R L Q K R D		- - -	
pG2991	(48)	K F S Q		Y Q K E K M		F S E R V G W R M P K A D		- - -	
pG2990	(46)	K F S Q		F Q K E K M		F A E R V G W K M Q K R D		- - -	
pG2989	(44)	K F S S		N Q K E K M		F A D R I G W K I Q K R D		- - -	
pG2995	(56)	K F T A		E Q K V K M		F A E R A G W K I N G W D		- - -	
pG2992	(50)	K F T P		E Q K I K M		F A E K A G W K I N G C D		- - -	
pG3000	(64)	K I N E		E Q K E K M		F A E R L G W R M Q K D		- - -	
pG3663	(102)	K F T Q		Q K D R M M		F A E K L G W K I Q K Q D		- - -	
pG2998	(62)	K F T T		E Q K E R M		F A E K L G W R M N K Q D		- - -	
pG3692	(124)	K F T E		Q K A R M L		F A E R L G W R M P K R E P		G R A P	
pG2999	(14)	K F N E		E Q K E K M		F A E K I G W R M T K L E		- - -	
pG2994	(54)	K F T P		E Q K E K M		F A E K V G W K I Q R Q E		- - -	
pG2993	(52)	K F T Q		E Q K E K M		F A E R V G W K I Q R Q E		- - -	
pG3683	(116)	K F T A		E Q K A R M L		F A E E V G W R L Q K L E		- - -	
pG2996	(58)	K F T A		E Q K E R M L		L A E E R I G W R I Q R Q D		- - -	
pG3668	(104)	K F T Q		D Q K D R M L		F S E A L G W R I Q K H D		- - -	
pG3671	(108)	K F T Q		E Q K D K M L		F A E R V G W R I Q K H D		- - -	
pG3674	(110)	K F T Q		E Q K D K M L		F A E R L G W R I Q K H D		- - -	
pG3670	(106)	K F T P		E Q K E K M L		F A E E L G W R I Q K H Q		- - -	
pG3675	(112)	K F T A		E Q K D K M L		F A E R L G W R I Q K H D		- - -	
pG2997	(60)	K F T A		E Q K E R M R		F A E R V G W R I Q K H D		- - -	
pG3690	(122)	K F T A		E Q K E R M R		F A H R V G W R I H K P D		- - -	
pG3694	(126)	K F T A		E Q K E R M R		F A H R V G W R I H K P D		- - -	
pG3685	(118)	K F T P		E Q K E Q M L		F A E R V G W R M Q K Q D		- - -	
pG3686	(120)	K F T R		E Q K E Q M L		F A E R V G W R I Q R Q E		- - -	
pG3695	(128)	K F T P		E Q K E R M R		F A E K Q G W R I N R N D		- - -	
pG3001	(66)	K F T A		E Q T E K M R		Y A E K L R W K V R P E R		- - -	
(687) (688) (689)		K F T		E Q K E K M		F A E R . G W R I Q K D		- - -	

FIG. 8N

FIG. 80

	SEQ ID NOs: added	460	470	480
pG3002	(68)	H		
pG3680_	(114)	L	G H S A R R S A S S P A P A P A A S L Q T P A A G A G	
pG2991_	(48)	R	- - - S G A R R A N G G - - - - V V V G G V G D	
pG2990	(46)	N	R D I A G N E I R Q I D N G G G N H T P I L A G E I N N	
pG2989	(44)	K	F S G G A T T V Q R N D N G - - - - I G G E N S N	
pG2995	(56)	-	- - - - N G R S R D T T S S - - - - M S L N L K L	
pG2992	(50)	L	- - - - N G K I R E I E H G - - - - L C L N T H S	
pG3000	(64)	K	R N N S N I S E	
pG3663_	(102)	K	K K Q I M	
pG2998	(62)	A	K K P P T P T T L	
pG3692_	(124)	G	G G G S G G P G A G G G A Q T S S S T T R G G G D V G	
pG2999	(14)	A	K K K D L	
pG2994	(54)	S	K K N N I N L E D N D N E K I N N L N N V D L S G N N D M	
pG2993	(52)	S	K K S N N V S N N V D L S A G N N D I T E N L A S T N P	
pG3683_	(116)	A	R R H L H P S P A A A G D D D D G A P P H P D P R R	
pG2996	(58)	G	K S P S P L H H H Q A P P P P P Q S S F H H E Q D Q P	
pG3668_	(104)	G	K K P	
pG3671_	(108)	G	K K L P	
pG3674_	(110)	G	K K A P	
pG3670_	(106)	G	K K P	
pG3675_	(112)	G	R K P	
pG2997	(60)	G	K K P	
pG3690_	(122)	K	T P P S P T S Q P P P P P L H H D P S P P P P H H H H H	
pG3694_	(126)	K	T P P S Q T W Q P P P P L H H D P S P P P P H H H H H	
pG3685_	(118)	G	S S S G G S R - - - - - - - - - - - - - - - -	
pG3686_	(120)	K	- -	
pG3695_	(128)	A	S S P T S A A A A A G V M N P G A G I G L G T G L G T G	
pG3001	(66)	I	I D E	

FIG. 8P

	SEQ ID NOs added	490	500	510
pG3002	(68)			
pG3680_	(114)	A G A A A P S F N P S R I T P P P P V L T S S P T A A T G		
pG2991	(48)	S R - - - Q S V V P T N - - - - - - - - G S F S S T		
pG2990	(46)	H N N G H H G V G G G E L H Q S V S S G G G G G F D S D		
pG2989	(44)	D D - G V R G L A N D G - - - - - D G G G G R F E S D		
pG2995	(56)			
pG2992	(50)	N D - - G D G S S S		
pG3000	(64)			
pG3663_	(102)			
pG2998	(62)			
pG3692_	(124)	V G L S P A M G G D G E D D E E V R G S E M C M		
pG2999	(14)			
pG2994	(54)	T K I V P		
pG2993	(52)			
pG3683_	(116)	R E L A A A A P P A P V T Q H I K K S V D N K S L I S S		
pG2996	(58)			
pG3668_	(104)			
pG3671_	(108)			
pG3674_	(110)			
pG3670_	(106)			
pG3675_	(112)			
pG2997	(60)			
pG3690_	(122)	H H H H H P P Q H H Q Q Q Q Q Q H D A		
pG3694_	(126)	H H H H H P P Q H H Q Q Q Q Q Q H D A		
pG3685_	(118)	- - - R Q P Q E Q Q S Q Q Q Q Q Q Q		
pG3686_	(120)	- - - - Q K Q Q Q E N R Q E Q Q Q		
pG3695_	(128)	I S G D G D G D D D D T D D S P P R A A V S S P S P I S		
pG3001	(66)			

FIG. 8Q

	SEQ ID NOs. added	520	530	540
pG3002	(68)			
pG3680_	(114)	F N I N G A A S S A P T V A T D Y T T D N A N G A S S P H S		
pG2991	(48)			
pG2990	(46)	S G G A N G G - N V N G S S S S		
pG2989	(44)	S G G A D G G N V N A S S S S S		
pG2995	(56)			
pG2992	(50)			
pG3000	(64)			
pG3663_	(102)			
pG2998	(62)			
pG3692_	(124)			
pG2999	(14)			
pG2994	(54)			
pG2993	(52)			
pG3683_	(116)	L A A L H C I A L L L F H Q I D A		
pG2996	(58)			
pG3668_	(104)			
pG3671_	(108)			
pG3674_	(110)			
pG3670_	(106)			
pG3675_	(112)			
pG2997	(60)			
pG3690_	(122)			
pG3694_	(126)			
pG3685_	(118)			
pG3686_	(120)			
pG3695_	(128)	V X L D S Q T H C H W H T L A		
pG3001	(66)			

FIG. 8R

SEQ ID
NOs: added



pG33002 (68)
pG33680 (114)
pG2991 (48)
pG2990 (46)
pG2989 (44)
pG2995 (56)
pG2992 (50)
pG33000 (64)
pG33663 (102)
pG2998 (62)
pG33692 (124)
pG2999 (14)
pG2994 (54)
pG2993 (52)
pG33683 (116)
pG2996 (58)
pG33668 (104)
pG33671 (108)
pG33674 (110)
pG33670 (106)
pG33675 (112)
pG2997 (60)
pG33690 (122)
pG33694 (126)
pG33685 (118)
pG33686 (120)
pG33695 (128)
pG33001 (66)

A

550 560 570

FIG. 8S

SEQ ID No. added	10	20	30
G431-HD (612)	R K K	W S	S E
G432-HD (613)	K K K	E R	S E
G425-HD (614)	R R A	W W	P P
G426-HD (615)	R R A	W W	P P
G418-HD (616)	R P Q	W W	P P
G419-HD (617)	R P Q	W W	P P
G412-HD (618)	N G L	W W	P P
G1545-HD (619)	N G W	W W	P P
G399-HD (620)	E T S	W W	P P
G400-HD (621)	D N S	W W	P P
G384-HD (622)	N K K	W W	P P
G388-HD (623)	R K R	W W	P P
G392-HD (624)	K Y V	W W	P P
G438-HD (625)	K Y V	W W	P P
G1585-HD (626)	R W N	W W	P P
G1540-HD (627)	W T -	W W	P P
G415-HD (628)	K S S	W W	P P
G416-HD (629)	G R R	W W	P P
pG3002_HD(630)	V Q R	W W	P P
pG3001_HD (631)	V K R	W W	P P
pG3000_HD (632)	K K R	W W	P P
pG2999_HD (633)	K K R	W W	P P
pG2998_HD (634)	K K R	W W	P P
pG2997_HD (635)	T K R	W W	P P
pG2996_HD (636)	R K R	W W	P P
pG2995_HD (637)	K K R	W W	P P
pG2994_HD (638)	K K R	W W	P P
pG2993_HD (639)	K K R	W W	P P
pG2992_HD (640)	R K R	W W	P P
pG2991_HD (641)	R K R	W W	P P
pG2990_HD (642)	R K R	W W	P P
pG2989_HD (643)	R K R	W W	P P

FIG. 9A

SEQ ID	NCs added
1	0
2	0
3	0
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
12	0
13	0
14	0
15	0
16	0
17	0
18	0
19	0
20	0
21	0
22	0
23	0
24	0
25	0
26	0
27	0
28	0
29	0
30	0
31	0
32	0
33	0
34	0
35	0
36	0
37	0
38	0
39	0
40	0
41	0
42	0
43	0
44	0
45	0
46	0
47	0
48	0
49	0
50	0
51	0
52	0
53	0
54	0
55	0
56	0
57	0
58	0
59	0
60	0
61	0
62	0
63	0
64	0
65	0
66	0
67	0
68	0
69	0
70	0
71	0
72	0
73	0
74	0
75	0
76	0
77	0
78	0
79	0
80	0
81	0
82	0
83	0
84	0
85	0
86	0
87	0
88	0
89	0
90	0
91	0
92	0
93	0
94	0
95	0
96	0
97	0
98	0
99	0
100	0
101	0
102	0
103	0
104	0
105	0
106	0
107	0
108	0
109	0
110	0
111	0
112	0
113	0
114	0
115	0
116	0
117	0
118	0
119	0
120	0
121	0
122	0
123	0
124	0
125	0
126	0
127	0
128	0
129	0
130	0
131	0
132	0
133	0
134	0
135	0
136	0
137	0
138	0
139	0
140	0
141	0
142	0
143	0
144	0
145	0
146	0
147	0
148	0
149	0
150	0
151	0
152	0
153	0
154	0
155	0
156	0
157	0
158	0
159	0
160	0
161	0
162	0
163	0
164	0
165	0
166	0
167	0
168	0
169	0
170	0
171	0
172	0
173	0
174	0
175	0
176	0
177	0
178	0
179	0
180	0
181	0

FIG. 9B

	SEQ ID	Non-added	
G431-HD (612)	K	R	H
G432-HD (613)	K	R	H
G425-HD (614)	K	R	N
G426-HD (615)	K	R	N
G418-HD (616)	V	R	L
G419-HD (617)	V	R	L
G412-HD (618)	A	R	W
G1545-HD (619)	A	R	W
G399-HD (620)	A	R	T
G400-HD (621)	A	R	T
G384-HD (622)	T	Q	M
G388-HD (623)	T	Q	I
G392-HD (624)	C	R	E
G438-HD (625)	C	R	D
G1585-HD (626)	S	R	A
G1540-HD (627)	A	R	E
G415-HD (628)	W	S	I
G416-HD (629)	Y	M	A
pG3002_HD(630)	K	F	Y
pG3001_HD (631)	D	K	I
pG3000_HD (632)	Q	A	M
pG2999_HD (633)	Q	A	A
pG2998_HD (634)	N	N	A
pG2997_HD (635)	N	S	L
pG2996_HD (636)	H	T	L
pG2995_HD (637)	Y	F	N
pG2994_HD (638)	I	H	F
pG2993_HD (639)	Q	N	L
pG2992_HD (640)	Y	S	L
pG2991_HD (641)	I	S	G
pG2990_HD (642)	N	T	F
pG2989_HD (643)	N	S	F

FIG. 9C

SEQ ID
Nos. added

		pG3002 At (68)
		pG3680 Zm (114)
	100	pG2991 At (48)
	100	pG2990 At (46)
		pG2989 At (44)
	100	pG2995 At (56)
		pG2992 At (50)
		pG3000 At (64)
		pG3663 Lj (102)
		pG2998 At (62)
		pG3692 Os (jap) (124)
		pG2999 At (14)
	100	pG2994 At (54)
		pG2993 At (52)
		pG3683 Os (jap) (116)
		pG2996 At (58)
		pG3668 Fb (104)
	95	pG3671 Os (108)
	96	pG3674 Os (110)
		pG3670 Lj (106)
	97	pG3675 Bn (113)
		pG2997 At (60)
		pG3690 Os (jap) (122)
	92	pG3694 Os (jap) (126)
	89	pG3685 Os (jap) (118)
		pG3686 Os (ind) (120)
		pG3695 Os (jap) (128)
		pG3001 At 66)

FIG. 10A

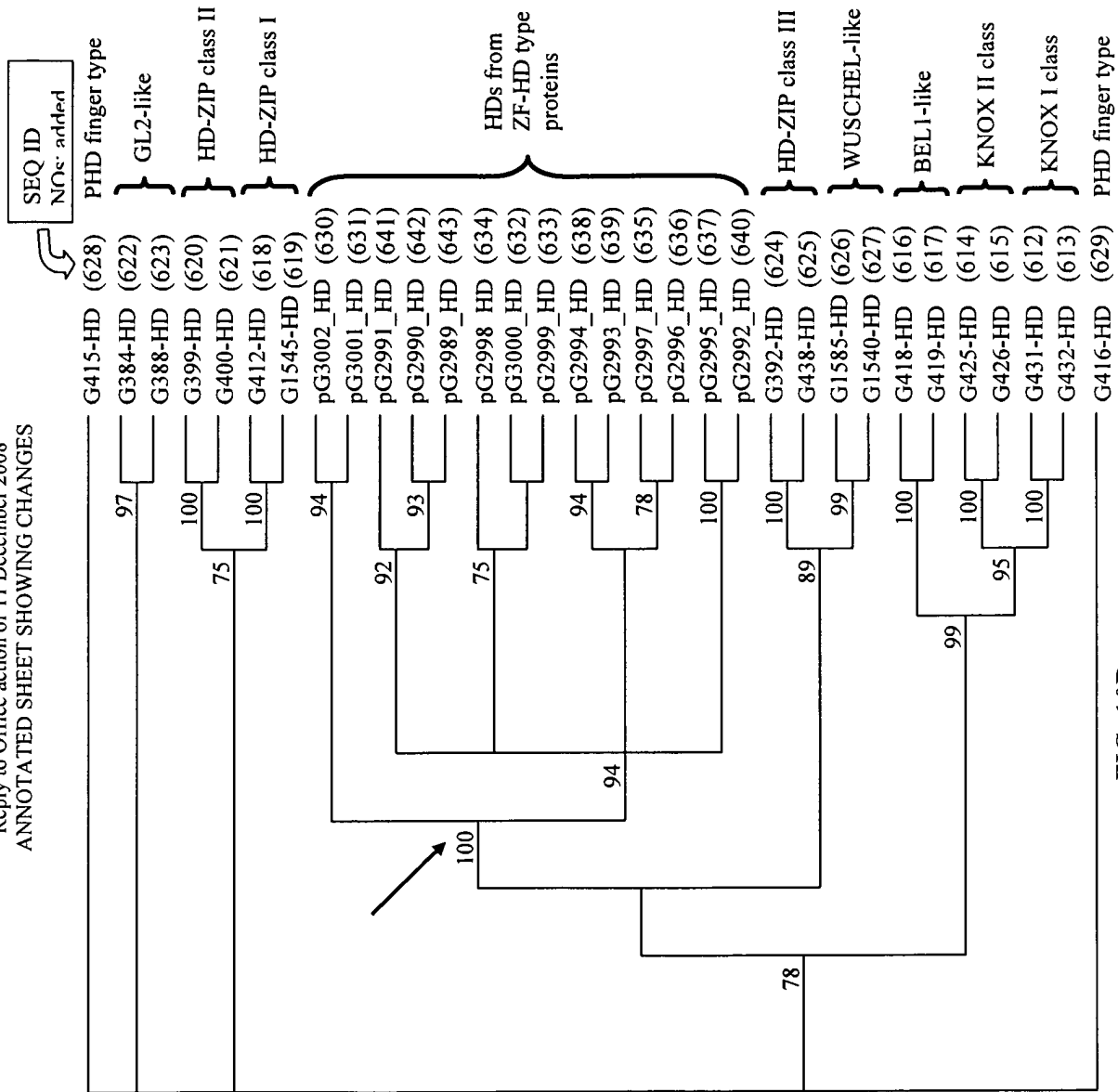


FIG. 10B

SEQ ID NOs added	10	20	30	40
G1752 (573)				
G1791 (34)				
G1795 (36)				
G30 (18)				
G3380 (70)				
G3794 (200)				
G3736 (162)				
G3381 (72)				
G3517 (80)				
G3739 (166)				
G3520 (86)				
G3383 (74)				
G3737 (164)				
G3515 (76)				
G3516 (78)				
G1792 (8)				
G3518 (82)				
G3519 (84)				
G3735 (160)				
G26 (574)				
G22 (575)				
G1006 (576)				
G28 (577)				
G1751 (578)				
G45 (579)	M H Y P N N R T E F V G A P A T R Y Q K E Q L S P E Q E L S V I V S A			
G1266 (580)	M V R V C V Y T Q K T P D F M W N L K P S M K C G Q Y L R T Q V S P T V L P N Y			
G2512 (581)				
			M E S S - - N R S S -	
				M H S G K R P L S P E S M A G N R
		M S - - - - S S D S V N N G V N S R M Y F R -		
		M Y G Q C N I E S D Y A L L E S I T R H L L G G		
		M S M T A D S Q S D Y A F L E S I R R H L L G -		

FIG. 12A

SEQ ID NOs: added		50	60	70	80
G1752 (573)					
G1791 (34)					
G1795 (36)					
G30 (18)					
G3380 (70)					
G3794 (200)					
G3736 (162)					
G3381 (72)					
G3517 (80)					
G3739 (166)					
G3520 (86)					
G3383 (74)					
G3737 (164)					
G3515 (76)					
G3516 (78)					
G1792 (8)		- - - - -	N N Q - - - - -	- - - - -	- - - - -
G3518 (82)					
G3519 (84)					
G3735 (160)					
G26 (574)		E E K K E L C C C S T L S E S D - - - - -	- - - - -	- - - - -	- - - - -
G22 (575)		- - - - - N P S F S N V - - - - -	- - - - -	- - - - -	- - - - -
G1006 (576)		G G E N E L R L N E S T P S S - - - - -	- - - - -	- - - - -	- - - - -
G28 (577)		- - E S E P I L S E S T A S S V T Q S C V T G Q S I K P V Y G R N P S F S K L -	- - - - -	- - - - -	- - - - -
G1751 (578)		L Q H V I S G E N E T A P C Q G F S S D S T V I S A G M P R L D S D T C Q V C R	- - - - -	- - - - -	- - - - -
G45 (579)		P A A D S T M A F G N I Q E L D G E I L K N V W A N Y I G T P Q T D T R S I Q -	- - - - -	- - - - -	- - - - -
G1266 (580)					
G2512 (581)					

FIG. 12B

SEQ ID NOs: added	90										100										110										120									
G1752 (573)																																								
G1791 (34)																																								
G1795 (36)																																								
G30 (18)																																								
G3380 (70)																																								
G3794 (200)																																								
G3736 (162)																																								
G3381 (72)																																								
G3517 (80)																																								
G3739 (166)																																								
G3520 (86)																																								
G3383 (74)																																								
G3737 (164)																																								
G3515 (76)																																								
G3516 (78)																																								
G1792 (8)																																								
G3518 (82)																																								
G3519 (84)																																								
G3735 (160)																																								
G26 (574)																																								
G22 (575)																																								
G1006 (576)																																								
G28 (577)																																								
G1751 (578)																																								
G45 (579)																																								
G1266 (580)																																								
G2512 (581)																																								

FIG. 12C

	SEQ ID	130	140	150	160
	NCs added				
G1752 (573)	SWSSSQESLWNE SC - FL D Q S S E P Q A F F C - - P N Y D Y S D D F				
G1791 (34)	ES - - Y N T N E M - - - - -				
G1795 (36)	GR - - G V G A E H G - - - - -				
G30 (18)	GRSSGS - G G G G A E Q G - - - - -				
G3380 (70)	D G G G G W D D Q G N G G G - - - - -				
G3794 (200)	D G G - - - - -				
G3736 (162)	E G S - - - G G G - - - - -				
G3381 (72)	H Q Q Q - - - Q Q E G - - - - -				
G3517 (80)	E W S K - D - G G G G - - - - -				
G3739 (166)	D W S K - D - G G G G - - - - -				
G3520 (86)	S K E K - - - K K D T - - - - -				
G3383 (74)	N R S - - - - K D T - - - - -				
G3737 (164)	D K - - - - K E A - - - - -				
G3515 (76)	D K S - - - - K E G - - - - -				
G3516 (78)	D K - - - - K E G - - - - -				
G1792 (8)	- - - - - - - - - - - - - - - - -				
G3518 (82)	GRSSVS - - - - N G N - - - - -				
G3519 (84)	GRSSVS - - - - N G N - - - - -				
G3735 (160)	D H K L V S N S - - T N G N G - - - - -				
G26 (574)	S S S - - - L T L Q E K S - - - - -				
G22 (575)	N T L R D A V S S G W T P S V P - - - P V T - - - S P A E E N K P P A T K A				
G1006 (576)	G L L K D A F H - - F D T S S S - - - D L S C L F D F P A V K V E P T E N F T				
G28 (577)	G I L N D A F H G G W E P S S S S S D E D R S - - - S F P S V K I E T P E S F A				
G1751 (578)	E E E I T S S S N R R R E S S P - - - - -				
G45 (579)	S R E M L Q S L D M S T E D Q E W T E I L D A I A S F P N - - K T N H D P L T N Y				
G1266 (580)	S P D S F S S S S S N N Y S L P F N E N D S E - E M F L Y G L I E Q S T Q Q T Y				
G2512 (581)	S W S S - Q E S F L W E E S - - F L H Q S F D - Q S F L L S S P T D N Y C D D F				

FIG. 12D

ANNOTATED SHEET SHOWING CHANGES

	SEQ ID Nucleotide	170	180	190	200
G1752 (573)	F S F E S P E M M I K	E E E I Q N G D V S N S E E E K V G I D E E R S	Y R G V R R		
G1791 (34)	- - - - -	- - - - -	- - - - -	- - - - -	Y R G V R R
G1795 (36)	- - - - -	- - - - -	- - - - -	- - - - -	Y R G V R R
G30 (18)	- - - - -	- - - - -	- - - - -	- - - - -	Y R G V R R
G3380 (70)	- - E T - - -	- - - - -	- - - - -	- - - - -	Y R G V R R
G3794 (200)	- - E P - - -	- - - - -	- - - - -	- - - - -	Y R G V R R
G3736 (162)	- - E P - - -	- - - - -	- - - - -	- - - - -	Y R G V R R
G3381 (72)	- - E L V - -	- - - - -	- - - - -	- - - - -	Y R G V R R
G3517 (80)	- - E P - - -	- - - - -	- - - - -	- - - - -	Y R G V R R
G3739 (166)	- - E P - - -	- - - - -	- - - - -	- - - - -	Y R G V R R
G3520 (86)	- - K E E - -	- - - - -	- - - - -	- - - - -	Y R G V R R
G3383 (74)	- - A T - - -	- - - - -	- - - - -	- - - - -	Y R G V R R
G3737 (164)	- - A S - - -	- - - - -	- - - - -	- - - - -	Y R G V R R
G3515 (76)	- - K S S - -	- - - - -	- - - - -	- - - - -	Y R G V R R
G3516 (78)	- - K - - - -	- - - - -	- - - - -	- - - - -	Y R G V R R
G1792 (8)	- - - - -	- - - - -	- - - - -	- - - - -	Y R G V R R
G3518 (82)	- - - - -	- - - - -	- - - - -	- - - - -	Y R G V R R
G3519 (84)	- - - - -	- - - - -	- - - - -	- - - - -	Y R G V R R
G3735 (160)	- - N G N G - - -	- - - - -	- - - - -	- - - - -	Y R G V R R
G26 (574)	- - N S R - - - -	- - - - -	- - - - -	- - - - -	Y R G V R R
G22 (575)	S G S H A P - - -	- - - - -	- - - - -	- - - - -	Y R G V R R
G1006 (576)	A M E E K P - - -	- - - - -	- - - - -	- - - - -	Y R G V R R
G28 (577)	A V D S V P V - -	- - - - -	- - - - -	- - - - -	Y R G V R R
G1751 (578)	K K A E G G G K I R	- - - - -	- - - - -	- - - - -	Y R G V R R
G45 (579)	P T I D S C S L S S R	- - - - -	- - - - -	- - - - -	Y R G V R R
G1266 (580)	I D S D S Q D L P I K	- - - - -	- - - - -	- - - - -	Y R G V R R
G2512 (581)	F A F E S S - - I I K	- - - - -	- - - - -	- - - - -	Y R G V R R
(692)		- - - - -	- - - - -	- - - - -	Y R G V R R

FIG. 12E

SEQ ID NOs: added		210										220										230										240										
G1752_ (573)	K	R	P	W	G	K	F	A	A	E	I	R	D	S	T	R	N	G	I	R	V	W	L	G	T	F	D	K	A	E	E	A	A	L	A	Y	D	Q	A	A	A	
G1791_ (34)	K	R	P	W	G	K	Y	A	A	E	I	R	D	S	A	R	H	G	A	R	V	W	L	G	T	F	N	T	A	E	E	D	A	A	R	A	Y	D	R	A	A	A
G1795_ (36)	R	R	P	W	G	K	Y	A	A	E	I	R	D	S	R	K	H	G	E	R	V	W	L	G	T	F	D	T	A	E	E	A	A	R	A	Y	D	Q	A	A	A	A
G30_ (18)	R	R	P	W	G	K	Y	A	A	E	I	R	D	S	R	K	H	G	E	R	V	W	L	G	T	F	D	T	A	E	E	D	A	A	R	A	Y	D	R	A	A	A
G3380_ (70)	R	R	P	S	G	K	F	A	A	E	I	R	D	S	S	R	Q	S	V	R	M	W	L	G	T	F	D	T	A	E	E	A	A	R	A	Y	D	R	A	A	A	
G3794_ (200)	R	R	P	S	G	K	F	A	A	E	I	R	D	S	S	R	Q	S	V	R	M	W	L	G	T	F	D	T	A	E	E	A	A	R	A	Y	D	R	S	A	A	
G3736_ (162)	R	R	P	W	G	K	F	A	A	E	I	R	D	S	S	R	H	G	V	R	M	W	L	G	T	F	D	T	A	E	E	A	A	A	A	Y	D	R	S	A	A	
G3381_ (72)	R	R	P	W	G	K	F	A	A	E	I	R	D	S	S	R	H	G	V	R	W	L	G	T	F	D	T	A	E	E	A	A	R	A	Y	D	R	S	A	A		
G3517_ (80)	R	R	P	W	G	K	Y	A	A	E	I	R	D	S	S	R	H	G	V	R	I	W	L	G	T	F	D	T	A	E	E	A	A	R	A	Y	D	R	S	A	A	
G3739_ (166)	R	R	P	W	G	K	Y	A	A	E	I	R	D	S	S	R	H	G	V	R	I	W	L	G	T	F	D	T	A	E	E	A	A	R	A	Y	D	R	S	A	A	
G3520_ (86)	R	R	P	W	G	K	F	A	A	E	I	R	D	P	A	R	H	G	A	R	V	W	L	G	T	F	L	T	A	E	E	A	A	R	A	Y	D	R	A	A	A	
G3383_ (74)	R	R	P	W	G	K	F	A	A	E	I	R	D	P	E	R	G	G	A	R	V	W	L	G	T	F	D	T	A	E	E	A	A	R	A	Y	D	R	A	A	A	
G3737_ (164)	R	R	P	W	G	K	F	A	A	E	I	R	D	P	E	R	G	G	S	R	V	W	L	G	T	F	D	T	A	E	E	A	A	R	A	Y	D	R	A	A	A	
G3515_ (76)	K	R	P	W	G	K	F	A	A	E	I	R	D	P	E	R	G	G	S	R	V	W	L	G	T	F	D	T	A	E	E	A	A	R	A	Y	D	R	A	A	A	
G3516_ (78)	K	R	P	W	G	K	F	A	A	E	I	R	D	P	E	R	G	G	S	R	V	W	L	G	T	F	D	T	A	E	E	A	A	R	A	Y	D	R	A	A	A	
G1792_ (8)	R	R	P	W	G	K	F	A	A	E	I	R	D	P	S	R	N	G	A	R	L	W	L	G	T	F	E	T	A	E	E	A	A	R	A	Y	D	R	A	A	A	
G3518_ (82)	R	R	P	W	G	K	F	A	A	E	I	R	D	P	T	R	K	G	T	R	I	W	L	G	T	F	D	T	A	E	E	Q	A	A	R	A	Y	D	R	A	A	A
G3519_ (84)	R	R	P	W	G	K	F	A	A	E	I	R	D	P	T	R	K	G	T	R	I	W	L	G	T	F	D	T	A	E	E	Q	A	A	R	A	Y	D	R	A	A	A
G3735_ (160)	R	R	P	W	G	K	F	A	A	E	I	R	D	P	T	R	K	G	T	R	I	W	L	G	T	F	D	T	A	E	E	Q	A	A	R	A	Y	D	R	A	A	A
G26_ (574)	Q	R	P	W	G	K	W	A	A	E	I	R	D	P	N	K	-	A	A	R	V	W	L	G	T	F	D	T	A	E	E	A	A	L	A	Y	D	K	A	A	A	
G22_ (575)	Q	R	P	W	G	K	F	A	A	E	I	R	D	P	K	N	G	A	R	V	W	L	G	T	F	E	T	P	E	D	A	A	V	A	Y	D	R	A	A	A		
G1006_ (576)	Q	R	P	W	G	K	F	A	A	E	I	R	D	P	A	K	N	G	A	R	V	W	L	G	T	F	E	T	A	E	D	A	A	L	A	Y	D	R	A	A	A	
G28_ (577)	Q	R	P	W	G	K	F	A	A	E	I	R	D	P	A	K	N	G	A	R	V	W	L	G	T	F	E	T	A	E	D	A	A	L	A	Y	D	R	A	A	A	
G1751_ (578)	Q	R	P	W	G	K	F	A	A	E	I	R	D	P	A	K	N	G	A	R	V	W	L	G	T	F	E	T	A	E	D	A	A	L	A	Y	D	R	A	A	A	
G45_ (579)	K	R	P	W	G	K	F	A	A	E	I	R	D	P	K	R	-	A	T	R	V	W	L	G	T	F	E	T	A	E	D	A	A	R	A	Y	D	R	A	A	A	
G1266_ (580)	R	R	P	W	G	K	F	A	A	E	I	R	D	S	T	R	N	G	V	R	V	W	L	G	T	F	Q	T	A	E	E	A	A	M	A	Y	D	K	A	A	A	
G2512_ (581)	K	R	P	W	G	K	F	A	A	E	I	R	D	S	T	R	N	G	I	R	V	W	L	G	T	F	E	S	A	E	E	A	A	L	A	Y	D	Q	A	A	A	
(692) (693)	R	R	P	W	G	K	F	A	A	E	I	R	D	P	S	T	R	K	G	I	R	V	W	L	G	T	F	D	T	A	E	A	A	L	A	Y	D	Q	A	A	A	

FIG. 12F

SEQ ID NOs added	250										260										270										280										
	F	A	T	K	G	-	S	L	A	T	L	N	F	P	V	E	V	R	E	S	L	K	K	M	E	N	V	N	L	H	D	G	G	S	P	V	M	A	L		
G1752 (573)	F	A	T	K	G	-	S	L	A	T	L	N	F	P	V	E	V	R	E	S	L	K	K	M	E	N	V	N	L	H	D	G	G	S	P	V	M	A	L		
G1791 (34)	F	G	M	R	G	-	Q	R	A	I	L	N	F	P	H	E	Y	Q	M	K	D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
G1795 (36)	Y	S	M	R	G	-	Q	A	A	I	L	N	F	P	H	E	Y	N	M	G	S	G	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
G30 (18)	Y	S	M	R	G	-	K	A	A	I	L	N	F	P	H	E	Y	N	M	G	T	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
G3380 (70)	Y	A	M	R	G	-	H	L	A	V	L	N	F	P	A	E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
G3794 (200)	Y	A	M	R	G	-	Q	I	A	V	L	N	F	P	A	E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
G3736 (162)	Y	S	M	R	G	-	R	N	A	V	L	N	F	P	D	R	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
G3381 (72)	Y	S	M	R	G	-	A	N	A	V	L	N	F	P	A	D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
G3517 (80)	N	S	M	R	G	-	A	N	A	V	L	N	F	P	E	D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
G3739 (166)	Y	S	M	R	G	-	A	N	A	V	L	N	F	P	E	D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
G3520 (86)	Y	E	M	R	G	-	A	L	A	V	L	N	F	P	E	N	E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
G3383 (74)	Y	A	Q	R	G	-	A	A	V	L	N	F	P	P	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
G3737 (164)	F	A	M	K	G	-	A	M	A	V	L	N	F	P	P	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
G3515 (76)	F	A	M	K	G	-	A	T	A	M	L	N	F	P	P	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
G3516 (78)	F	A	M	K	G	-	A	T	A	V	L	N	F	P	P	A	S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
G1792 (8)	F	N	L	R	G	-	H	L	A	I	L	N	F	P	P	N	E	Y	Y	P	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
G3518 (82)	F	H	F	R	G	-	H	R	A	I	L	N	F	P	P	N	E	Y	Q	S	H	N	P	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
G3519 (84)	F	H	F	R	G	-	H	R	A	I	L	N	F	P	P	N	E	Y	Q	S	H	N	P	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
G3735 (160)	F	H	F	R	G	-	H	R	A	I	L	N	F	P	P	N	E	Y	Q	A	P	N	S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
G26 (574)	F	E	F	R	G	-	H	K	A	K	L	N	F	P	P	E	H	I	R	V	N	P	T	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
G22 (575)	F	Q	L	R	G	-	S	K	A	K	L	N	F	P	P	H	L	I	G	S	C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
G1006 (576)	F	R	M	R	G	-	S	R	A	L	L	N	F	P	P	L	R	V	N	S	G	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
G28 (577)	F	R	M	R	G	-	S	R	A	L	L	N	F	P	P	L	R	V	N	S	G	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
G1751 (578)	I	G	F	R	G	-	P	R	A	K	L	N	F	P	P	F	V	D	Y	T	S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
G45 (579)	V	R	I	R	G	-	T	Q	K	A	H	T	N	F	Q	L	E	T	V	I	K	A	M	E	M	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
G1266 (580)	F	S	M	R	G	-	S	S	A	I	L	N	F	S	A	E	R	V	Q	E	S	L	S	E	I	K	-	Y	T	Y	E	D	G	C	S	P	V	V	A	L	
G2512 (581)	F	A	L	K	G	-	S	L	A	V	L	N	F	P	P	A	D	V	V	E	E	S	L	R	K	M	E	N	V	N	L	N	D	G	E	S	P	V	I	A	L
(693) (679)	F	M	R	G	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		

FIG. 12G

	SEQ ID	290	300	310	320
G1752 (573)	K R K H S L R N R P R	- - - - -	G K K R S S S S S	S - - S S S	- S N S S S C S S S
G1791 (34)	P N - - - G S H E	- - - - -	N A V A S S S S G	- - - - -	- Y R G G G G D
G1795 (36)	S S S T A M A G S S S	- - - - -	A S A S A S S S	- - - - -	- - - - -
G30 (18)	- - - - - G S S S	- - - - -	T A A N S S S S	- - - - -	- - - - -
G3380 (70)	R N Y V R G S - - - -	- - - - -	G S - - - S S S S	- - - - -	- R Q - - - H Q
G3794 (200)	R N Y V R G - - - -	- - - - -	G S - - - S S S S	- - - - -	- R Q - - - Q Q
G3736 (162)	H V Y E A E A R R - Q	- - - - -	G Q - G S S S S A	- - - - -	- R Q Q N Q Q Q
G3381 (72)	H I Y A R Q L H N - N	- - - - -	N A A G S S S S	- - - - -	- S S - - - A A
G3517 (80)	P A Y A A A A S R - -	- - - - -	G S - A G G S S S	- - - - -	- R P - - - -
G3739 (166)	H A Y A A A C - R - -	- - - - -	G S G S S S S S S	- - - - -	- R H R - Q Q Q
G3520 (86)	P S C S S M N S S - -	- - - - -	S T L A P S S S S	- - - - -	- S N S M L K S D
G3383 (74)	A A A A G R G G - -	- - - - -	A G G A S S S S	- - - - -	- S S S S A Q
G3737 (164)	- - - G R T S S - -	- - - - -	T G S S S S S S S	- - - - -	- T P P A P V T
G3515 (76)	D H H G A A S R - M -	- - - - -	T S T G S S S S S	- - - - -	- F T T P P P A N
G3516 (78)	G S S A G A A P G R -	- - - - -	T S G G S S S S S	- - - - -	- T T S A P A S
G1792 (8)	R M D D Y S L R P P Y -	- - - - -	A S S S S S S S S	- - - - -	- G S T S T N V S
G3518 (82)	S S L P M P L A V S A -	- - - - -	P P S Y S S S S S	- - - - -	- S T S N Y S G D
G3519 (84)	S S L P M P L I V P - -	- - - - -	P P S Y S S S S S	- - - - -	- F T S N Y S A D
G3735 (160)	S S L P M P L T M P P P	- - - - -	S S N P P S S S S S	- - - - -	- S F S S Y T V D
G26 (574)	Q L Y P S P A T S H D R -	- - - - -	I V T P P S P P P P I	- - - - -	- A P D I L D Q Y G H F Q S R
G22 (575)	K Y E P V R I A R P R R -	- - - - -	R S P E P S V S S	- - - - -	- - - - - D Q L T S E K R
G1006 (576)	E P D P V R I T S K R - -	- - - - -	S S S S S S S S S	- - - - -	- S E N G K L K R R
G28 (577)	E P D P V R I K S K R - -	- - - - -	S S F S S S S S S	- - - - -	- E N G A P K K R
G1751 (578)	V S S P V A A D D I G -	- - - - -	A K A S A S S V S	- - - - -	- A T D S V E A E
G45 (579)	P N Y Y R M N N S N T -	- - - - -	S D P L R S S R -	- - - - -	- K I G L R - G K E A V K A Y
G1266 (580)	K R K H S M R R R - M -	- - - - -	T N K K T K D S S	- - - - -	- - - - - F D H R
G2512 (581)	K R K H S M R R R P R -	- - - - -	G K K K S S S S S	- - - - -	- S S S S S S S

SEQ ID NO.	Added										
		330	340	350	360						
G1752_ (573)	S S T S S	-	-	-	-	-	-	-	-	-	-
G1791_ (34)	D	-	-	-	-	-	-	-	-	-	-
G1795_ (36)	-	-	-	-	-	-	-	-	-	-	-
G30_ (18)	-	-	-	-	-	-	-	-	-	-	-
G3380_ (70)	Q	-	-	-	-	-	-	-	-	-	-
G3794_ (200)	Q G G G	-	-	-	-	-	-	-	-	-	-
G3736_ (162)	Q G Q	-	-	-	-	-	-	-	-	-	-
G3381_ (72)	A A	-	-	-	-	-	-	-	-	-	-
G3517_ (80)	A G	-	-	-	-	-	-	-	-	-	-
G3739_ (166)	Q G	-	-	-	-	-	-	-	-	-	-
G3520_ (86)	H	-	-	-	-	-	-	-	-	-	-
G3383_ (74)	R	-	-	-	-	-	-	-	-	-	-
G3737_ (164)	I	-	-	-	-	-	-	-	-	-	-
G3515_ (76)	S S A	-	-	-	-	-	-	-	-	-	-
G3516_ (78)	R	-	-	-	-	-	-	-	-	-	-
G1792_ (8)	R	-	-	-	-	-	-	-	-	-	-
G3518_ (82)	D N N N H	-	-	-	-	-	-	-	-	-	-
G3519_ (84)	D N N H	-	-	-	-	-	-	-	-	-	-
G3735_ (160)	D	-	-	-	-	-	-	-	-	-	-
G26_ (574)	S S D	-	-	-	-	-	-	-	-	-	-
G22_ (575)	R E S	-	-	-	-	-	-	-	-	-	-
G1006_ (576)	R	-	-	-	-	-	-	-	-	-	-
G28_ (577)	R T V	-	-	-	-	-	-	-	-	-	-
G1751_ (578)	Q W N	-	-	-	-	-	-	-	-	-	-
G45_ (579)	D E V D G M V E N H C A L S Y C S T K E H S E T R G L R G S E E T W F D L R K	-	-	-	-	-	-	-	-	-	-
G1266_ (580)	S	-	-	-	-	-	-	-	-	-	-
G2512_ (581)	S S S S	-	-	-	-	-	-	-	-	-	-

FIG. 12I

	SEQ ID NOs added										370	380	390	400
G1752 (573)	-	-	-	-	-	-	-	-	-	-	T	S S S S K Q S V V K -	Q E S G -	L V V F E D L G A E
G1791 (34)	-	-	-	-	-	-	-	-	-	-	-	G R E -	-	V I E F E Y L D D S
G1795 (36)	-	-	-	-	-	-	-	-	-	-	-	S R Q -	-	V F E F E Y L D D S
G30 (18)	-	-	-	-	-	-	-	-	-	-	-	S Q Q -	-	V F E F E Y L D D S
G3380 (70)	-	-	-	-	-	-	-	-	-	-	-	R Q -	-	V I E L E C L D D Q
G3794 (200)	-	-	-	-	-	-	-	-	-	-	G G S -	G Q Q -	-	V I E L E C L D D Q
G3736 (162)	-	-	-	-	-	-	-	-	-	-	-	S G -	-	V I E F E Y L D D D
G3381 (72)	-	-	-	-	-	-	-	-	-	-	-	A A R P -	-	P I E F E Y L D D H
G3517 (80)	-	-	-	-	-	-	-	-	-	-	-	S G R D -	-	V I E F E Y L D D E
G3739 (166)	-	-	-	-	-	-	-	-	-	-	-	S G R D -	-	V I E L E Y L D D E
G3520 (86)	-	-	-	-	-	-	-	-	-	-	-	G K Q -	-	V I E F E C L D D K
G3383 (74)	-	-	-	-	-	-	-	-	-	-	-	G R G -	-	K I E F E Y L D D K
G3737 (164)	-	-	-	-	-	-	-	-	-	-	-	S R H C A -	-	T T E K V E L V Y L D D K
G3515 (76)	-	-	-	-	-	-	-	-	-	-	-	A G R G S -	-	T T D K V E L E C L D D K
G3516 (78)	-	-	-	-	-	-	-	-	-	-	-	G R A R V P D -	-	S E K V E L E C L D D R
G1792 (8)	-	-	-	-	-	-	-	-	-	-	-	Q N Q -	-	R E V F E F E Y L D D K
G3518 (82)	-	-	-	-	-	-	-	-	-	-	-	G G D H -	-	D D D T F E L E Y F D N K
G3519 (84)	-	-	-	-	-	-	-	-	-	-	-	G G D -	-	L D D T F E L E Y L D N K
G3735 (160)	-	-	-	-	-	-	-	-	-	-	-	G F D -	-	E L E F L D N K
G26 (574)	-	-	-	-	-	-	-	-	-	-	-	S A N L S M N -	-	M L S S S L N H Q
G22 (575)	-	-	-	-	-	-	-	-	-	-	-	G E S S -	-	L V V P E L D F T V D Q F Y
G1006 (576)	-	-	-	-	-	-	-	-	-	-	-	K A E N L T S E -	-	V V Q V K C E V - G D E T R
G28 (577)	-	-	-	-	-	-	-	-	-	-	-	A A G G M D K -	-	G L T V K C E - V E V A
G1751 (578)	-	-	-	-	-	-	-	-	-	-	-	G G G D -	-	C N M E E W M N M M
G45 (579)	-	-	-	-	-	-	-	-	-	-	-	Q E V E M Q K T V T	-	G E E T V C D V F G L F E F E D L G S D
G1266 (580)	-	-	-	-	-	-	-	-	-	-	-	-	-	V K - L D N - V V V F E D L G E Q
G2512 (581)	-	-	-	-	-	-	-	-	-	-	-	-	-	L V V L E D L G A E
														. E . L D D

FIG. 12J

	SEQ ID NOs added		410	420	430	440
G1752 (573)	Y	L E Q	L L M S S C			
G1791 (34)	L	L E E L L	D Y G E - R S N Q - D N C N D A N R			
G1795 (36)	V	L E E L L	E - - - - - G - E - - - - - K P N K - -			
G30 (18)	V	L D E L L	E Y - G - E - - - - - N Y N K T H N I N M G K R Q			
G3380 (70)	V	L Q E M	L K G G D D Q Y R S A A G S K R N N Y			
G3794 (200)	V	L Q E M	L K G G D - - - - - G K K			
G3736 (162)	V	L Q S M	L H D H D K S - - - - - N K			
G3381 (72)	V	L Q E M	L R D H T T - - - - - N K			
G3517 (80)	V	L Q E M	L R S Q E P S A - - A A Q K K K			
G3739 (166)	V	L Q E M	L R N H E P S S - - S - A R K K M			
G3520 (86)	L	L E D L L	D C D D Y A Y - - - - - E K D L P K N			
G3383 (74)	V	L D D L L	D D E - K Y R G - - - - - K			
G3737 (164)	V	L D E L L	A E D Y S Y R N - - - - - N N N Y			
G3515 (76)	V	L E D L L	A E T - N Y R D - - - - - K N Y			
G3516 (78)	V	L E E L L	A E D - K Y N - - - - - K N			
G1792 (8)	V	L E E L L	D S - - E E R K R			
G3518 (82)	L	L E E L L	Q M Q D N R H F			
G3519 (84)	L	L E E L L	Q M Q D N R H F			
G3735 (160)	L	L Q E L L	- - Q D G T Q			
G26 (574)	G	L R P N	L E D G E - - - N V K N I S I H K R R K			
G22 (575)	F	D G S	L L M D - - Q S E C S Y S D N R I			
G1006 (576)	V	D - E L L	V S			
G28 (577)	R	G - R L L	V L			
G1751 (578)	M	M D F	G N G D S - - S D S G N T I A D M F Q			
G45 (579)	Y	L E T L L	S S F			
G1266 (580)	Y	L E E L L	G S S E - - N S G T W			
G2512 (581)	Y	L E E L	- M R S C - - - S			
	V	L . E L L				

FIG. 12K


SEQ ID NOs. added	450	460	470	480
				
G1752 (573)				
G1791 (34)				
G1795 (36)				
G30 (18)				
G3380 (70)				
G3794 (200)				
G3736 (162)				
G3381 (72)				
G3517 (80)				
G3739 (166)				
G3520 (86)				
G3383 (74)				
G3737 (164)				
G3515 (76)				
G3516 (78)				
G1792 (8)				
G3518 (82)				
G3519 (84)				
G3735 (160)				
G26 (574)				
G22 (575)				
G1006 (576)				
G28 (577)				
G1751 (578)				
G45 (579)				
G1266 (580)				
G2512 (581)				

FIG. 12L

	SEQ ID NOs. added															
G1752_At (582)	L	V	V	F	E	D	L	G	A	E	Y	L	E	Q	L	L
G1791_At (555)	V	I	E	F	E	Y	L	D	D	S	L	L	E	E	L	L
G1795_At (556)	V	F	E	F	E	Y	L	D	D	S	V	L	E	E	L	L
G30_At (557)	V	F	E	F	E	Y	L	D	D	S	V	L	D	E	L	L
G3380_Os (558)	V	I	E	L	E	C	L	D	D	Q	V	L	Q	E	M	L
G3794_Zm (559)	V	I	E	L	E	C	L	D	D	Q	V	L	Q	E	M	L
G3736-Ta (560)	V	I	E	F	E	Y	L	D	D	D	V	L	Q	S	M	L
G3381_Os (561)	P	I	E	F	E	Y	L	D	D	H	V	L	Q	E	M	L
G3517_Zm (562)	V	I	E	F	E	Y	L	D	D	E	V	L	Q	E	M	L
G3739_Zm (563)	V	I	E	L	E	Y	L	D	D	E	V	L	Q	E	M	L
G3520_Gm (564)	V	I	E	F	E	C	L	D	D	K	L	L	E	D	L	L
G3383_Os (565)	K	I	E	F	E	Y	L	D	D	K	V	L	D	D	L	L
G3737_Os (566)	K	V	E	L	V	Y	L	D	D	K	V	L	D	E	L	L
G3515_Os (567)	K	V	E	L	E	C	L	D	D	K	V	L	E	D	L	L
G3516_Zm (568)	K	V	E	L	E	C	L	D	D	R	V	L	E	E	L	L
G1792_At (569)	V	F	E	F	E	Y	L	D	D	K	V	L	E	E	L	L
G3518_Gm (570)	T	F	E	L	E	Y	F	D	N	K	L	L	E	E	L	L
G3519_Gm (571)	T	F	E	L	E	Y	L	D	N	K	L	L	E	E	L	L
G3735_Mt (572)	-	-	E	L	E	F	L	D	N	K	L	L	Q	E	L	L
G26_At (583)	S	S	S	S	S	S	L	N	H	Q	G	L	R	P	N	L
G22_At (584)	E	L	D	F	T	V	D	Q	F	Y	F	D	G	S	L	L
G1006_At (585)	K	C	E	V	-	G	D	E	T	R	V	D	-	E	L	L
G28_At (586)	T	V	K	C	E	-	V	E	V	A	R	G	-	R	L	L
G1751_At (587)	C	N	M	E	E	W	M	N	M	M	M	M	M	D	F	G
G45_At (588)	L	F	E	F	E	D	L	G	S	D	Y	L	E	T	L	L
G1266_At (589)	V	V	V	F	E	D	L	G	E	Q	Y	L	E	E	L	L
G2512_At (590)	L	V	V	L	E	D	L	G	A	E	Y	L	E	E	L	-
(591)					E			D				L				L

G1792
clade

FIG. 13

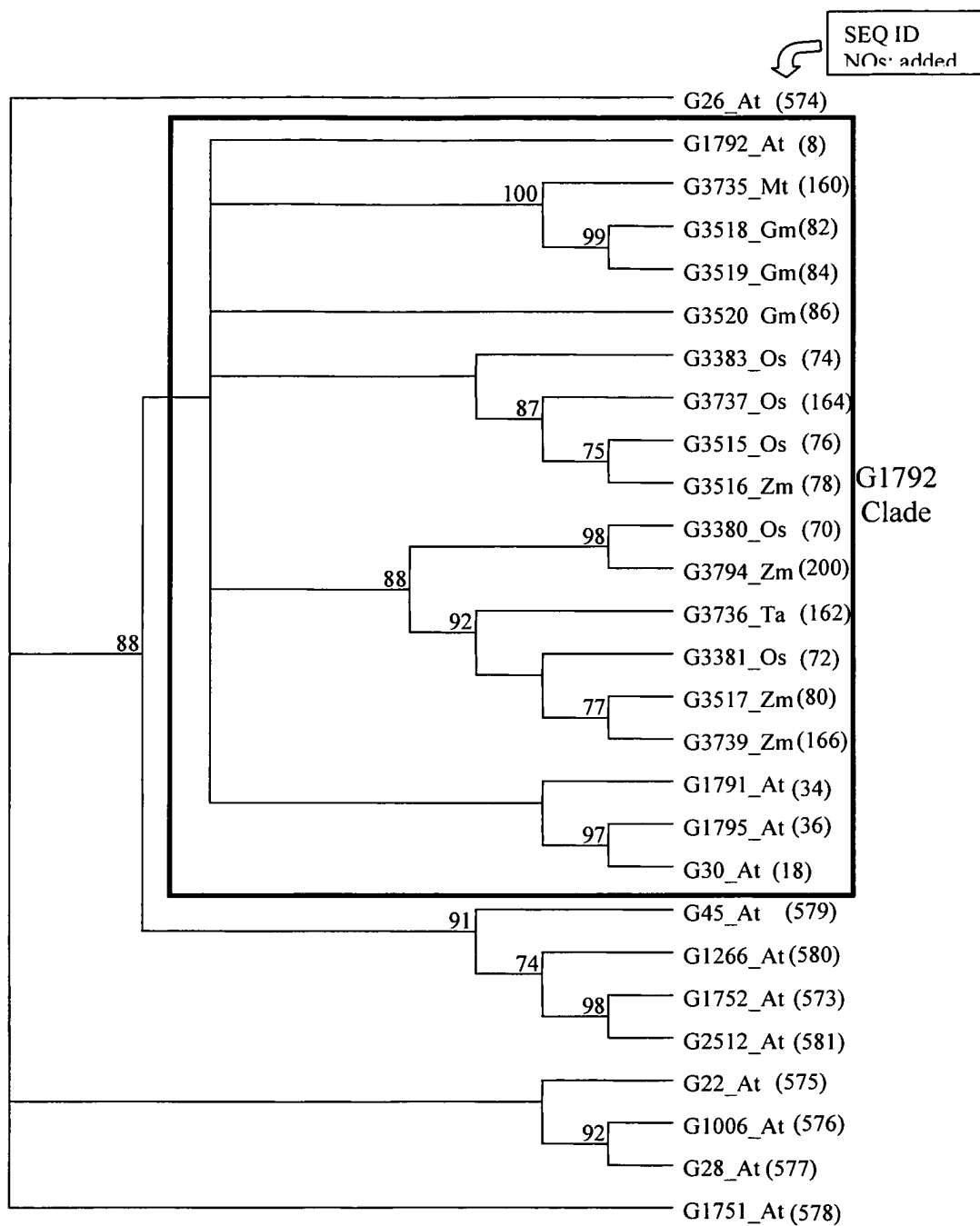


FIG. 14

ANNOTATED SHEET SHOWING CHANGES							
1	SEQ ID	NOs added		70			
G2767 (645)	~MIIPETDS	FFFQEQPQ..	.HQPLYPDEA	LSPSLFGFDH	YDHFYESFLP	SQEIFLPSPK	TRVFNESQEL
G1131 (646)	MDMIIPETDS	FFFQSQPQLE	FHQPLFQEEA	PSQT...H	FDPFCDQFLS	PQEIFLPNPK	NEIFNETHDL
G2766 (42)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G2149 (38)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G2555 (40)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G1134 (38)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3771 (194)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3763 (180)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3764 (182)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3767 (188)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3768 (190)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3769 (192)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3765 (184)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3766 (186)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3744 (174)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3755 (178)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G592 (26)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3742 (172)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3086 (16)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3782 (198)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3740 (168)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3741 (170)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3772 (196)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3746 (176)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3752 (647)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3753 (648)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3751 (649)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G793 (650)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G591 (651)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3750 (652)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3748 (653)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3749 (654)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G589 (655)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G1061 (656)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G2791 (657)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3774 (658)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3760 (659)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~

FIG. 16A

[illegible]

Appl. No. 10/714,887
Amdt. dated 11 June 2008
Reply to Office action of 11 December 2008
ANNOTATED SHEET SHOWING CHANGES

SEQ ID		N ^o s added	
141			
G2767	(645)	KKRELSAQSI	AARKRRRRIT
G1131	(646)	KKPTLSSQSI	AARGRRRRRIA
G2766	(42)	~~~~~	~~~~~
G2149	(38)	~~~~~	~~~~~
G2555	(40)	~~~~~	~~~~~
G1134	(38)	~~~~~	~~~~~
G3771	(194)	~~~~~	~~~~~
G3763	(180)	~~~~~	~~~~~
G3764	(182)	~~~~~	~~~~~
G3767	(188)	~~~~~	~~~~~
G3768	(190)	~~~~~	~~~~~
G3769	(192)	~~~~~	~~~~~
G3765	(184)	~~~~~	~~~~~
G3766	(186)	~~~~~	~~~~~
G3744	(174)	~~~~~	~~~~~
G3755	(178)	~~~~~	~~~~~
G592	(26)	~~~~~	~~~~~
G3742	(172)	~~~~~	~~~~~
G3086	(16)	~~~~~	~~~~~
G3782	(198)	~~~~~	~~~~~
G3740	(168)	~~~~~	~~~~~
G3741	(170)	~~~~~	~~~~~
G3772	(196)	~~~~~	~~~~~
G3746	(176)	~~~~~	~~~~~
G3752	(647)	~~~~~	~~~~~
G3753	(648)	~~~~~	~~~~~
G3751	(649)	~~~~~	~~~~~
G793	(650)	~~~~~	~~~~~
G591	(651)	~~~~~	~~~~~
G3750	(652)	~~~~~	~~~~~
G3748	(653)	~~~~~	~~~~~
G3749	(654)	~~~~~	~~~~~
G589	(655)	~~~~~	~~~~~
G1061	(656)	~~~~~	~~~~~
G2791	(657)	~~~~~	~~~~~
G3774	(658)	~~~~~	~~~~~
G3760	(659)	~~~~~	~~~~~

FIG. 16C

SEQ ID
NNs added

FIG. 16D

SEQ ID	NUM added
--------	-----------

FIG. 16E

SEQ ID	NOs. added
1	1
2	1
3	1
4	1
5	1
6	1
7	1
8	1
9	1
10	1
11	1
12	1
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15	1
16	1
17	1
18	1
19	1
20	1
21	1
22	1
23	1
24	1
25	1
26	1
27	1
28	1
29	1
30	1
31	1
32	1
33	1
34	1
35	1
36	1
37	1
38	1
39	1
40	1
41	1
42	1
43	1
44	1
45	1
46	1
47	1
48	1
49	1
50	1
51	1
52	1
53	1
54	1
55	1
56	1
57	1
58	1
59	1
60	1
61	1
62	1
63	1
64	1
65	1
66	1
67	1
68	1
69	1
70	1
71	1
72	1
73	1
74	1
75	1
76	1
77	1
78	1
79	1
80	1
81	1
82	1
83	1
84	1
85	1
86	1
87	1
88	1
89	1
90	1
91	1
92	1
93	1
94	1
95	1
96	1
97	1
98	1
99	1
100	1
101	1
102	1
103	1
104	1
105	1
106	1
107	1
108	1
109	1
110	1
111	1
112	1
113	1
114	1
115	1
116	1
117	1
118	1
119	1
120	1
121	1
122	1
123	1
124	1
125	1
126	1
127	1
128	1
129	1
130	1
131	1
132	1
133	1
134	1
135	1
136	1
137	1
138	1
139	1
140	1
141	1
142	1
143	1
144	1
145	1
146	1
147	1
148	1
149	1
150	1
151	1
152	1
153	1
154	1
155	1
156	1
157	1
158	1
159	1
160	1
161	1
162	1
163	1
164	1
165	1
166	1
167	1
168	1
169	1
170	1
171	1
172	1
173	1
174	1
175	1
176	1
177	1
178	1
179	1
180	1
181	1

FIG. 16F

Appl. No. 10/714,887
Amdt. dated 11 June 2008
Reply to Office action of 11 December 2008
ANNOTATED SHEET SHOWING CHANGES

SEQ ID		NOs. added		490	
421	G2767 (645)	~~~~~	~~~~~	~~~~~	~~~~~
G2767	(645)	~~~~~	~~~~~	~~~~~	~~~~~
G1131	(646)	~~~~~	~~~~~	~~~~~	~~~~~
G2766	(42)	~~~~~	~~~~~	~~~~~	~~~~~
G2149	(38)	~~~~~	~~~~~	~~~~~	~~~~~
G2555	(40)	~~~~~	~~~~~	~~~~~	~~~~~
G1134	(38)	~~~~~	~~~~~	~~~~~	~~~~~
G3771	(194)	~~~~~	~~~~~	~~~~~	~~~~~
G3763	(180)	~~~~~	~~~~~	~~~~~	~~~~~
G3764	(182)	~~~~~	~~~~~	~~~~~	~~~~~
G3767	(188)	~~~~~	~~~~~	~~~~~	~~~~~
G3768	(190)	~~~~~	~~~~~	~~~~~	~~~~~
G3769	(192)	~~~~~	~~~~~	~~~~~	~~~~~
G3765	(184)	~~~~~	~~~~~	~~~~~	~~~~~
G3766	(186)	~~~~~	~~~~~	~~~~~	~~~~~
G3744	(174)	~~~~~	~~~~~	~~~~~	~~~~~
G3755	(178)	~~~~~	~~~~~	~~~~~	~~~~~
G592	(26)	~~~~~	~~~~~	~~~~~	~~~~~
G3742	(172)	~~~~~	~~~~~	~~~~~	~~~~~
G3086	(16)	~~~~~	~~~~~	~~~~~	~~~~~
G3782	(198)	~~~~~	~~~~~	~~~~~	~~~~~
G3740	(168)	~~~~~	~~~~~	~~~~~	~~~~~
G3741	(170)	~~~~~	~~~~~	~~~~~	~~~~~
G3772	(196)	~~~~~	~~~~~	~~~~~	~~~~~
G3746	(176)	~~~~~	~~~~~	~~~~~	~~~~~
G3752	(647)	~~~~~	~~~~~	~~~~~	~~~~~
G3753	(648)	~~~~~	~~~~~	~~~~~	~~~~~
G3751	(649)	~~~~~	~~~~~	~~~~~	~~~~~
G793	(650)	~~~~~	~~~~~	~~~~~	~~~~~
G591	(651)	~~~~~	~~~~~	~~~~~	~~~~~
G3750	(652)	~~~~~	~~~~~	~~~~~	~~~~~
G3748	(653)	~~~~~	~~~~~	~~~~~	~~~~~
G3749	(654)	~~~~~	~~~~~	~~~~~	~~~~~
G589	(655)	~~~~~	~~~~~	~~~~~	~~~~~
G1061	(656)	~~~~~	~~~~~	~~~~~	~~~~~
G2791	(657)	~~~~~	~~~~~	~~~~~	~~~~~
G3774	(658)	~~~~~	~~~~~	~~~~~	~~~~~
G3760	(659)	~~~~~	~~~~~	~~~~~	~~~~~

FIG. 16G

FIG. 16H

SEQ ID NOs. added		630	
561	~~~~~	~~~~~	~~~~~
G2767 (645)	~~~~~	~~~~~	~~~~~
G1131 (646)	~~~~~	~~~~~	~~~~~
G2766 (42)	~~~~~	~~~~~	~~~~~
G2149 (38)	~~~~~	~~~~~	~~~~~
G2555 (40)	~~~~~	~~~~~	~~~~~
G1134 (38)	~~~~~	~~~~~	~~~~~
G3771 (194)	~~~~~	~~~~~	~~~~~
G3763 (180)	~~~~~	~~~~~	~~~~~
G3764 (182)	~~~~~	~~~~~	~~~~~
G3767 (188)	~~~~~	~~~~~	~~~~~
G3768 (190)	~~~~~	~~~~~	~~~~~
G3769 (192)	~~~~~	~~~~~	~~~~~
G3765 (184)	~~~~~	~~~~~	~~~~~
G3766 (186)	~~~~~	~~~~~	~~~~~
G3744 (174)	~~~~~	~~~~~	~~~~~
G3755 (178)	~~~~~	~~~~~	~~~~~
G592 (26)	~~~~~	~~~~~	~~~~~
G3742 (172)	~~~~~	~~~~~	~~~~~
G3086 (16)	~~~~~	~~~~~	~~~~~
G3782 (198)	~~~~~	~~~~~	~~~~~
G3740 (168)	~~~~~	~~~~~	~~~~~
G3741 (170)	~~~~~	~~~~~	~~~~~
G3772 (196)	~~~~~	~~~~~	~~~~~
G3746 (176)	~~~~~	~~~~~	~~~~~
G3752 (647)	~~~~~	~~~~~	~~~~~
G3753 (648)	~~~~~	~~~~~	~~~~~
G3751 (649)	~~~~~	~~~~~	~~~~~
G793 (650)	~~~~~	~~~~~	~~~~~
G591 (651)	~~~~~	~~~~~	~~~~~
G3750 (652)	~~~~~	~~~~~	~~~~~
G3748 (653)	~~~~~	~~~~~	~~~~~
G3749 (654)	~~~~~	~~~~~	~~~~~
G589 (655)	~~~~~	~~~~~	~~~~~
G1061 (656)	~~~~~	~~~~~	~~~~~
G2791 (657)	~~~~~	~~~~~	~~~~~
G3774 (658)	~~~~~	~~~~~	~~~~~
G3760 (659)	~~~~~	~~~~~	~~~~~

FIG. 16I

SEQ ID NOs added		700									
631	(645)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G2767	(646)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G1131	(42)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G2766	(38)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G2149	(40)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G2555	(38)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G1134	(194)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3771	(180)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3763	(182)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3764	(188)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3767	(190)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3768	(192)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3769	(184)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3765	(186)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3766	(174)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3744	(178)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3755	(26)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G592	(172)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3742	(16)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3086	(198)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3782	(168)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3740	(170)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3741	(196)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3772	(176)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3746	(647)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3752	(648)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3753	(649)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3751	(650)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G793	(651)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G591	(652)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3750	(653)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3748	(654)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3749	(655)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G589	(656)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G1061	(657)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G2791	(658)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3774	(659)	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~
G3760		~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~	~~~~~

FIG. 16J

SEQ ID No. added		770	
701	~~~~~	~~~~~	~~~~~
G2767 (645)	~~~~~	~~~~~	~~~~~
G1131 (646)	~~~~~	~~~~~	~~~~~
G2766 (42)	~~~~~	~~~~~	~~~~~
G2149 (38)	~~~~~	~~~~~	~~~~~
G2555 (40)	~~~~~	~~~~~	~~~~~
G1134 (38)	~~~~~	~~~~~	~~~~~
G3771 (194)	~~~~~	~~~~~	~~~~~
G3763 (180)	~~~~~	~~~~~	~~~~~
G3764 (182)	~~~~~	~~~~~	~~~~~
G3767 (188)	~~~~~	~~~~~	~~~~~
G3768 (190)	~~~~~	~~~~~	~~~~~
G3769 (192)	~~~~~	~~~~~	~~~~~
G3765 (184)	~~~~~	~~~~~	~~~~~
G3766 (186)	~~~~~	~~~~~	~~~~~
G3744 (174)	~~~~~	~~~~~	~~~~~
G3755 (178)	~~~~~	~~~~~	~~~~~
G592 (26)	~~~~~	~~~~~	~~~~~
G3742 (172)	~~~~~	~~~~~	~~~~~
G3086 (16)	~~~~~	~~~~~	~~~~~
G3782 (198)	~~~~~	~~~~~	~~~~~
G3740 (168)	~~~~~	~~~~~	~~~~~
G3741 (170)	~~~~~	~~~~~	~~~~~
G3772 (196)	~~~~~	~~~~~	~~~~~
G3746 (176)	~~~~~	~~~~~	~~~~~
G3752 (647)	~~~~~	~~~~~	~~~~~
G3753 (648)	~~~~~	~~~~~	~~~~~
G3751 (649)	~~~~~	~~~~~	~~~~~
G793 (650)	~~~~~	~~~~~	~~~~~
G591 (651)	~~~~~	~~~~~	~~~~~
G3750 (652)	~~~~~	~~~~~	~~~~~
G3748 (653)	~~~~~	~~~~~	~~~~~
G3749 (654)	~~~~~	~~~~~	~~~~~
G589 (655)	~~~~~	~~~~~	~~~~~
G1061 (656)	~~~~~	~~~~~	~~~~~
G2791 (657)	~~~~~	~~~~~	~~~~~
G3774 (658)	~~~~~	~~~~~	~~~~~
G3760 (659)	~~~~~	~~~~~	~~~~~
APGAVLPLLR	ESQTECHSNP	SLS.....	...ASTISQ
APGAVLPLLA	ESQTEGYRGQ	LLS.....	...APTNAQ
AAEAVVPLLT	ETQTES.PGF	LLSPRSSSGE	ROAGAGAVTG
GAGAVAPLVT	EMPLSSSVED	ET.....Q	AWWEKWSNDG
GAGAVAPLVT	DMPPLSSSVED	ETGEGGRTPQ	PAWEKWSNDG
GAGAVAQLVA	DIPL..SVKG	EASDSGGNQ	IWEKWSNDG
GAAGMAPLVA	SMSSE..GNS	NGSSNGGGGK	ASKGGTGEGG
GASAVAPLVA	NMSSESNGNG	NATSSSGNGE	AANGSSNGDN
GAASAS...S	QISEDAGG..	.....	.SHE..NTSS
GAASVS...S	QISE.AGG..	.....	.SHE..NTSS
GAGSVGPRLN	GLSAEAG...	...GRLNAL	TAPC..NGLN
GAAAVAPLVA	DMSSEGGGDC	IQANGKSNNG	GAQA..STTN
GAAFLLTWR	VCVVLGGRR	RGGRGRER--	~~~~~

FIG. 16K

SEQ ID Nos. added		840	
771	~~~~~	~~~~~	~~~~~
G2767 (645)	~~~~~	~~~~~	~~~~~
G1131 (646)	~~~~~	~~~~~	~~~~~
G2766 (42)	~~~~~	~~~~~	~~~~~
G2149 (38)	~~~~~	~~~~~	~~~~~
G2555 (40)	~~~~~	~~~~~	~~~~~
G1134 (38)	~~~~~	~~~~~	~~~~~
G3771 (194)	~~~~~	~~~~~	~~~~~
G3763 (180)	~~~~~	~~~~~	~~~~~
G3764 (182)	~~~~~	~~~~~	~~~~~
G3767 (188)	~~~~~	~~~~~	~~~~~
G3768 (190)	~~~~~	~~~~~	~~~~~
G3769 (192)	~~~~~	~~~~~	~~~~~
G3765 (184)	~~~~~	~~~~~	~~~~~
G3766 (186)	~~~~~	~~~~~	~~~~~
G3744 (174)	~~~~~	~~~~~	~~~~~
G3755 (178)	~~~~~	~~~~~	~~~~~
G592 (26)	~~~~~	~~~~~	~~~~~
G3742 (172)	~~~~~	~~~~~	~~~~~
G3086 (16)	~~~~~	~~~~~	~~~~~
G3782 (198)	~~~~~	~~~~~	~~~~~
G3740 (168)	~~~~~	~~~~~	~~~~~
G3741 (170)	~~~~~	~~~~~	~~~~~
G3772 (196)	~~~~~	~~~~~	~~~~~
G3746 (176)	~~~~~	~~~~~	~~~~~
G3752 (647)	~~~~~	~~~~~	~~~~~
G3753 (648)	~~~~~	~~~~~	~~~~~
G3751 (649)	~~~~~	~~~~~	~~~~~
G793 (650)	~~~~~	~~~~~	~~~~~
G591 (651)	~~~~~	~~~~~	~~~~~
G3750 (652)	~~~~~	~~~~~	~~~~~
G3748 (653)	~~~~~	~~~~~	~~~~~
G3749 (654)	~~~~~	~~~~~	~~~~~
G589 (655)	~~~~~	~~~~~	~~~~~
G1061 (656)	~~~~~	~~~~~	~~~~~
G2791 (657)	~~~~~	~~~~~	~~~~~
G3774 (658)	~~~~~	~~~~~	~~~~~
G3760 (659)	~~~~~	~~~~~	~~~~~

FIG. 16L

SEQ ID	NOs. added
1	1
2	1
3	1
4	1
5	1
6	1
7	1
8	1
9	1
10	1
11	1
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39	1
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44	1
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48	1
49	1
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54	1
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88	1
89	1
90	1
91	1
92	1
93	1
94	1
95	1
96	1
97	1
98	1
99	1
100	1

FIG. 16M

SEQ ID	NUM added
--------	-----------

FIG. 16N

SEQ ID	NCs added
1	0
2	0
3	0
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
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18	0
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25	0
26	0
27	0
28	0
29	0
30	0
31	0
32	0
33	0
34	0
35	0
36	0
37	0
38	0
39	0
40	0
41	0
42	0
43	0
44	0
45	0
46	0
47	0
48	0
49	0
50	0
51	0
52	0
53	0
54	0
55	0
56	0
57	0
58	0
59	0
60	0
61	0
62	0
63	0
64	0
65	0
66	0
67	0
68	0
69	0
70	0
71	0
72	0
73	0
74	0
75	0
76	0
77	0
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81	0
82	0
83	0
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85	0
86	0
87	0
88	0
89	0
90	0
91	0
92	0
93	0
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95	0
96	0
97	0
98	0
99	0
100	0
101	0
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136	0
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145	0
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148	0
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150	0
151	0
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154	0
155	0
156	0
157	0
158	0
159	0
160	0
161	0
162	0
163	0
164	0
165	0
166	0
167	0
168	0
169	0
170	0
171	0
172	0
173	0
174	0
175	0
176	0
177	0
178	0
179	0
180	0
181	0

FIG. 160

SEQ ID	NOs. added
1	1
2	1
3	1
4	1
5	1
6	1
7	1
8	1
9	1
10	1
11	1
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24	1
25	1
26	1
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28	1
29	1
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34	1
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39	1
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53	1
54	1
55	1
56	1
57	1
58	1
59	1
60	1
61	1
62	1
63	1
64	1
65	1
66	1
67	1
68	1
69	1
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163	1
164	1
165	1
166	1
167	1
168	1
169	1
170	1
171	1
172	1
173	1
174	1
175	1
176	1
177	1
178	1
179	1
180	1
181	1

[illegible]

SEQ ID	NOs added	1121	1190
G2767 (645)	~	~	~
G1131 (646)	~	~	~
G2766 (42)	QYDSAAGATR DFSSLGPOTH	~	~
G2149 (38)	RSDSTTCGVN NSSDGQKQLG	~	~
G2555 (40)	~	~	~
G1134 (38)	~	~	~
G3771 (194)	~	~	~
G3763 (180)	~	~	~
G3764 (182)	VDLPVAGSA FDGSFGVVHS	~	~
G3767 (188)	~	~	~
G3768 (190)	~	~	~
G3769 (192)	GSSGTQNFYQ STGRPPLPNQ	~	~
G3765 (184)	~	~	~
G3766 (186)	~	~	~
G3744 (174)	~	~	~
G3755 (178)	~	~	~
G592 (26)	SYAATLPPPP QLEPSSFLGL	~	~
G3742 (172)	~	~	~
G3086 (16)	EVVSGDGEI SVNPEVSIY	~	~
G3782 (198)	AYSSTSKNTL IRHSSSPAGL	~	~
G3740 (168)	~	~	~
G3741 (170)	GHGHGGKH HFHQFGVEAK	~	~
G3772 (196)	~	~	~
G3746 (176)	CRTTTTTSTA AAADVGRHPL	~	~
G3752 (647)	~	~	~
G3753 (648)	~	~	~
G3751 (649)	~	~	~
G793 (650)	~	~	~
G591 (651)	~	~	~
G3750 (652)	~	~	~
G3748 (653)	~	~	~
G3749 (654)	~	~	~
G589 (655)	~	~	~
G1061 (656)	~	~	~
G2791 (657)	~	~	~
G3774 (658)	~	~	~
G3760 (659)	~	~	~

FIG. 16Q

Appl. No. 10/714,887
Amdt. dated 11 June 2008
Reply to Office action of 11 December 2008
ANNOTATED SHEET SHOWING CHANGES

[illegible]

SEQ ID	NOs added	1330									
		1261	1262	1263	1264	1265	1266	1267	1268	1269	1270
G2767	(645)	MSFGNRTNN	WDNSSHSIF	TIDQPGKRSK	N..SDFFTLE	TOYSMP...Q	TTLEMATMEN				
G1131	(646)	AARNGVASSS	HDGSGHSFSA	ASFGAATDS	YLSGN	WDSSHSIF	DT..SMNYMDN				
G2766	(42)	FGIPANYD..	GGGLARFR..	YLSGN	WDSSHSIF	DT..SMNYMDN					
G2149	(38)	GGGLARFR..	YLSGN	WDSSHSIF	DT..SMNYMDN						
G2555	(40)	GGGLARFR..	YLSGN	WDSSHSIF	DT..SMNYMDN						
G1134	(38)	GGGLARFR..	YLSGN	WDSSHSIF	DT..SMNYMDN						
G3771	(194)	GGGLARFR..	YLSGN	WDSSHSIF	DT..SMNYMDN						
G3763	(180)	GGGLARFR..	YLSGN	WDSSHSIF	DT..SMNYMDN						
G3764	(182)	GGGLARFR..	YLSGN	WDSSHSIF	DT..SMNYMDN						
G3767	(188)	GGGLARFR..	YLSGN	WDSSHSIF	DT..SMNYMDN						
G3768	(190)	GGGLARFR..	YLSGN	WDSSHSIF	DT..SMNYMDN						
G3769	(192)	GGGLARFR..	YLSGN	WDSSHSIF	DT..SMNYMDN						
G3765	(184)	GGGLARFR..	YLSGN	WDSSHSIF	DT..SMNYMDN						
G3766	(186)	GGGLARFR..	YLSGN	WDSSHSIF	DT..SMNYMDN						
G3744	(174)	GGGLARFR..	YLSGN	WDSSHSIF	DT..SMNYMDN						
G3755	(178)	GGGLARFR..	YLSGN	WDSSHSIF	DT..SMNYMDN						
G592	(26)	GGGLARFR..	YLSGN	WDSSHSIF	DT..SMNYMDN						
G3742	(172)	GGGLARFR..	YLSGN	WDSSHSIF	DT..SMNYMDN						
G3086	(16)	GGGLARFR..	YLSGN	WDSSHSIF	DT..SMNYMDN						
G3782	(198)	GGGLARFR..	YLSGN	WDSSHSIF	DT..SMNYMDN						
G3740	(168)	GGGLARFR..	YLSGN	WDSSHSIF	DT..SMNYMDN						
G3741	(170)	GGGLARFR..	YLSGN	WDSSHSIF	DT..SMNYMDN						
G3772	(196)	GGGLARFR..	YLSGN	WDSSHSIF	DT..SMNYMDN						
G3746	(176)	GGGLARFR..	YLSGN	WDSSHSIF	DT..SMNYMDN						
G3752	(647)	GGGLARFR..	YLSGN	WDSSHSIF	DT..SMNYMDN						
G3753	(648)	GGGLARFR..	YLSGN	WDSSHSIF	DT..SMNYMDN						
G3751	(649)	GGGLARFR..	YLSGN	WDSSHSIF	DT..SMNYMDN						
G793	(650)	GGGLARFR..	YLSGN	WDSSHSIF	DT..SMNYMDN						
G591	(651)	GGGLARFR..	YLSGN	WDSSHSIF	DT..SMNYMDN						
G3750	(652)	GGGLARFR..	YLSGN	WDSSHSIF	DT..SMNYMDN						
G3748	(653)	GGGLARFR..	YLSGN	WDSSHSIF	DT..SMNYMDN						
G3749	(654)	GGGLARFR..	YLSGN	WDSSHSIF	DT..SMNYMDN						
G589	(655)	GGGLARFR..	YLSGN	WDSSHSIF	DT..SMNYMDN						
G1061	(656)	GGGLARFR..	YLSGN	WDSSHSIF	DT..SMNYMDN						
G2791	(657)	GGGLARFR..	YLSGN	WDSSHSIF	DT..SMNYMDN						
G3774	(658)	GGGLARFR..	YLSGN	WDSSHSIF	DT..SMNYMDN						
G3760	(659)	GGGLARFR..	YLSGN	WDSSHSIF	DT..SMNYMDN						

FIG. 16S

Reply to Office action of 11 December 2008
ANNOTATED SHEET SHOWING CHANGES

SEQ ID	NOs added	1400									
		1331	1332	1333	1334	1335	1336	1337	1338	1339	1340
G2767 (645)	~	~	~	~	~	~	~	~	~	~	~
G1131 (646)	~	~	~	~	~	~	~	~	~	~	~
G2766 (42)	~	~	~	~	~	~	~	~	~	~	~
G2149 (38)	~	~	~	~	~	~	~	~	~	~	~
G2555 (40)	~	~	~	~	~	~	~	~	~	~	~
G1134 (38)	~	~	~	~	~	~	~	~	~	~	~
G3771 (194)	~	~	~	~	~	~	~	~	~	~	~
G3763 (180)	~	~	~	~	~	~	~	~	~	~	~
G3764 (182)	~	~	~	~	~	~	~	~	~	~	~
G3767 (188)	~	~	~	~	~	~	~	~	~	~	~
G3768 (190)	~	~	~	~	~	~	~	~	~	~	~
G3769 (192)	~	~	~	~	~	~	~	~	~	~	~
G3765 (184)	~	~	~	~	~	~	~	~	~	~	~
G3766 (186)	~	~	~	~	~	~	~	~	~	~	~
G3744 (174)	~	~	~	~	~	~	~	~	~	~	~
G3755 (178)	~	~	~	~	~	~	~	~	~	~	~
G592 (26)	~	~	~	~	~	~	~	~	~	~	~
G3742 (172)	~	~	~	~	~	~	~	~	~	~	~
G3086 (16)	~	~	~	~	~	~	~	~	~	~	~
G3782 (198)	~	~	~	~	~	~	~	~	~	~	~
G3740 (168)	~	~	~	~	~	~	~	~	~	~	~
G3741 (170)	~	~	~	~	~	~	~	~	~	~	~
G3772 (196)	~	~	~	~	~	~	~	~	~	~	~
G3746 (176)	~	~	~	~	~	~	~	~	~	~	~
G3752 (647)	~	~	~	~	~	~	~	~	~	~	~
G3753 (648)	~	~	~	~	~	~	~	~	~	~	~
G3751 (649)	~	~	~	~	~	~	~	~	~	~	~
G793 (650)	~	~	~	~	~	~	~	~	~	~	~
G591 (651)	~	~	~	~	~	~	~	~	~	~	~
G3750 (652)	~	~	~	~	~	~	~	~	~	~	~
G3748 (653)	~	~	~	~	~	~	~	~	~	~	~
G3749 (654)	~	~	~	~	~	~	~	~	~	~	~
G589 (655)	~	~	~	~	~	~	~	~	~	~	~
G1061 (656)	~	~	~	~	~	~	~	~	~	~	~
G2791 (657)	~	~	~	~	~	~	~	~	~	~	~
G3774 (658)	~	~	~	~	~	~	~	~	~	~	~
G3760 (659)	~	~	~	~	~	~	~	~	~	~	~

FIG. 16T

SEQ ID	Nucleotide	1428
1401	G2767 (645)	~~~~~
G2767	G2767 (645)	~~~~~
G1131	G1131 (646)	~~~~~
G2766	G2766 (42)	~~~~~
G2149	G2149 (38)	~~~~~
G2555	G2555 (40)	~~~~~
G1134	G1134 (38)	~~~~~
G3771	G3771 (194)	~~~~~
G3763	G3763 (180)	~~~~~
G3764	G3764 (182)	~~~~~
G3767	G3767 (188)	~~~~~
G3768	G3768 (190)	~~~~~
G3769	G3769 (192)	~~~~~
G3765	G3765 (184)	~~~~~
G3766	G3766 (186)	~~~~~
G3744	G3744 (174)	~~~~~
G3755	G3755 (178)	~~~~~
G592	G592 (26)	~~~~~
G3742	G3742 (172)	~~~~~
G3086	G3086 (16)	~~~~~
G3782	G3782 (198)	~~~~~
G3740	G3740 (168)	~~~~~
G3741	G3741 (170)	~~~~~
G3772	G3772 (196)	~~~~~
G3746	G3746 (176)	~~~~~
G3752	G3752 (647)	~~~~~
G3753	G3753 (648)	~~~~~
G3751	G3751 (649)	~~~~~
G793	G793 (650)	~~~~~
G591	G591 (651)	~~~~~
G3750	G3750 (652)	~~~~~
G3748	G3748 (653)	~~~~~
G3749	G3749 (654)	~~~~~
G589	G589 (655)	~~~~~
G1061	G1061 (656)	~~~~~
G2791	G2791 (657)	~~~~~
G3774	G3774 (658)	~~~~~
G3760	G3760 (659)	~~~~~

FIG. 16U

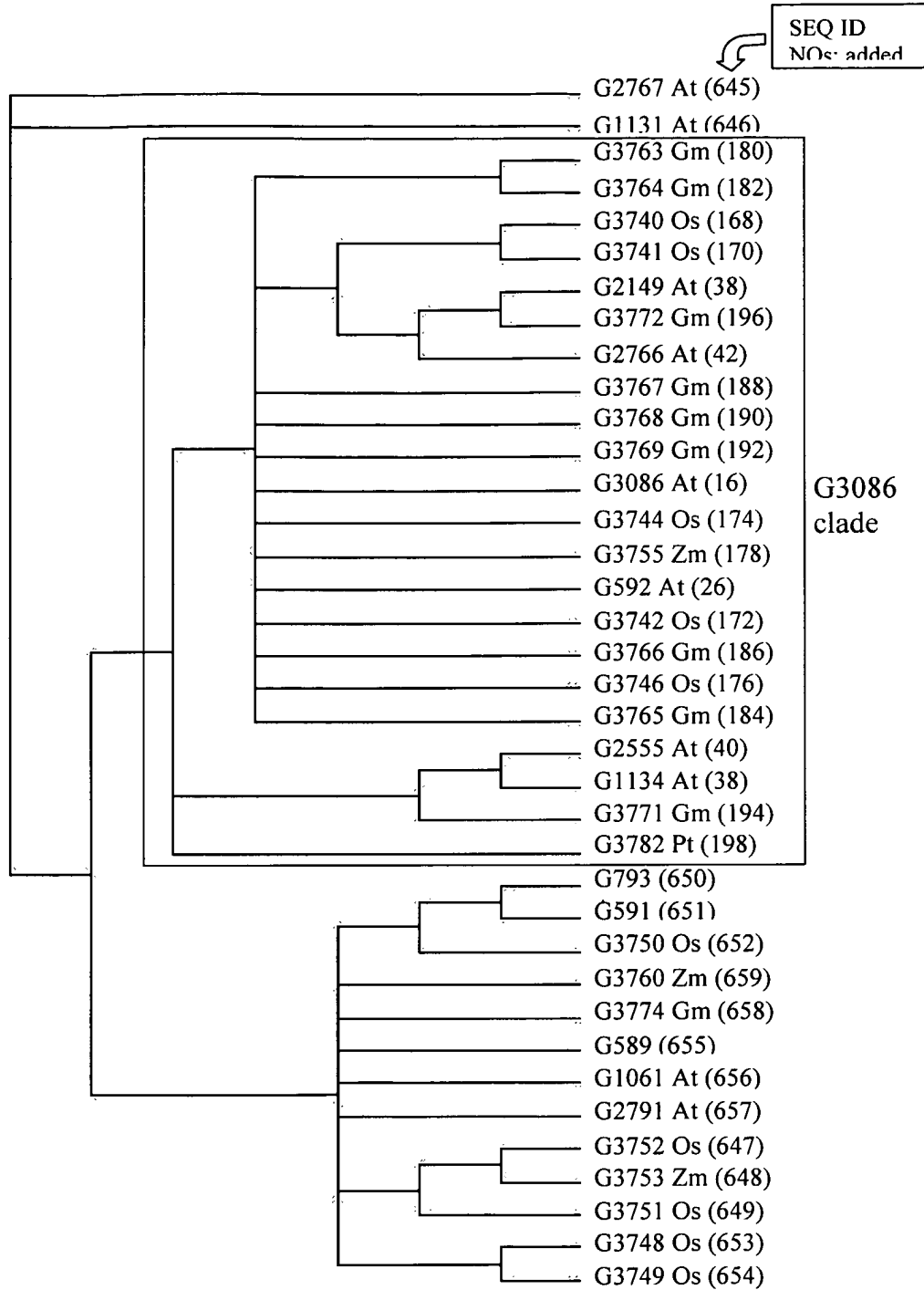


FIG. 17

SEQ ID
NOs: added

G3810_Gm	(212)	-----
G3811_Gm	(214)	-----
G3824_Le	(220)	-----
G922_At	(4)	-----
G3812_Gm	(479)	-----
G3814_Os	(218)	-----
G3813_Os	(216)	-----
G3827_Os	(222)	-----
G306_At	(480)	MAESG---DFN---GGQPPPHSPILRTSSGSSS-----NNRGPPPPPPPLVMVRKRLA 49
G3821_Ps	(481)	MAACA---LFNGVGGGTTTTPDETNNNSTSSNISTEDFHNMPQQQPHHSEKLLRKRMA 57
G3822_Zm	(482)	MPPPPPPPLTPYCRRCPPPHLPPPPSPNHFLLH---YLHQLDHQEAAAAAMVRKRPA 57
G2738_At	(483)	-----
G3009_At	(484)	-----
G307_At	(485)	-----
G308_At	(486)	-----
G309_At	(487)	-----
G3816-Ta	(488)	-----
G3817_Os	(489)	-----
G3818_Gm	(490)	-----
G3010_At	(491)	-----
G3826_Le	(492)	-----
G644_At	(493)	-----
G3823_Os	(494)	-----
G3820_Os	(495)	-----
G1768_At	(496)	-----
G3815_Os	(497)	-----
G3825_Le	(498)	-----
G852_At	(499)	-----
G3819_Os	(500)	-----
G1767_At	(501)	-----

FIG. 19A

SEQ ID
NOs added



G3810_Gm (212)	-----	
G3811_Gm (214)	-----	
G3824_Le (220)	-----	
G922_At (4)	-----	
G3812_Gm (479)	-----	
G3814_Os (218)	-----	
G3813_Os (216)	-----	
G3827_Os (222)	-----	
G306_At (480)	SEMSSNPDYNNSS-----RPPRRVS-----	69
G3821_Ps (481)	SEMELQLHNNNNNDYHRFSRRTNNTSSLNCSLPATTQKGVTTTTTTTLASSGNNNNNN	117
G3822_Zm (482)	SDMDLPPPPRRHVT-----	70
G2738_At (483)	-----	
G3009_At (484)	-----	
G307_At (485)	-----	
G308_At (486)	-----	
G309_At (487)	-----	
G3816_Ta (488)	-----	
G3817_Os (489)	-----	
G3818_Gm (490)	-----	
G3010_At (491)	-----MGSYPDGFPG	10
G3826_Le (492)	-----MEALFQEQLFP	11
G644_At (493)	-----MITEPSLTGISG	12
G3823_Os (494)	-----	
G3820_Os (495)	-----MVIELPFDNQYTTTETEOPHDGS	23
G1768_At (496)	-----	
G3815_Os (497)	-----	
G3825_Le (498)	-----	
G852_At (499)	-----	
G3819_Os (500)	-----	
G1767_At (501)	-----	

FIG. 19B

SEQ ID
NOs. added

G3810_Gm	(212)	-----	
G3811_Gm	(214)	-----	
G3824_Le	(220)	-----	
G922_At	(4)	-----	
G3812_Gm	(479)	-----	
G3814_Os	(218)	-----	
G3813_Os	(216)	-----	
G3827_Os	(222)	-----	
G306_At	(480)	-----	99
G3821_Ps	(481)	-----	177
G3822_Zm	(482)	-----	90
G2738_At	(483)	-----	
G3009_At	(484)	-----	
G307_At	(485)	-----	
G308_At	(486)	-----	
G309_At	(487)	-----	
G3816_Ta	(488)	-----	
G3817_Os	(489)	-----	
G3818_Gm	(490)	-----	
G3010_At	(491)	-----	65
G3826_Le	(492)	-----	60
G644_At	(493)	-----	68
G3823_Os	(494)	-----	14
G3820_Os	(495)	-----	81
G1768_At	(496)	-----	
G3815_Os	(497)	-----	
G3825_Le	(498)	-----	
G852_At	(499)	-----	4
G3819_Os	(500)	-----	
G1767_At	(501)	-----	

FIG. 19C

SEQ ID
NOs: added

G3810_Gm	(212)	-----	
G3811_Gm	(214)	-----	
G3824_Le	(220)	-----	
G922_At	(4)	-----	
G3812_Gm	(479)	-----	
G3814_Os	(218)	-----	
G3813_Os	(216)	-----	
G3827_Os	(222)	-----	
G306_At	(480)	-----	133
G3821_Ps	(481)	-----	237
G3822_Zm	(482)	-----	127
G2738_At	(483)	-----	51
G3009_At	(484)	-----	41
G307_At	(485)	-----	51
G308_At	(486)	-----	34
G309_At	(487)	-----	39
G3816_Ta	(488)	-----	45
G3817_Os	(489)	-----	46
G3818_Gm	(490)	-----	26
G3010_At	(491)	-----	124
G3826_Le	(492)	-----	112
G644_At	(493)	-----	119
G3823_Os	(494)	-----	52
G3820_Os	(495)	-----	131
G1768_At	(496)	-----	
G3815_Os	(497)	-----	26
G3825_Le	(498)	-----	26
G852_At	(499)	-----	64
G3819_Os	(500)	-----	36
G1767_At	(501)	-----	35

FIG. 19D

SEQ ID
NOs: added

G3810_Gm	(212)	-----	
G3811_Gm	(214)	-----	
G3824_Le	(220)	-----	
G922_At	(4)	-----	
G3812_Gm	(479)	-----	
G3814_Os	(218)	-----	
G3813_Os	(216)	-----	
G3827_Os	(222)	-----	
G306_At	(480)	-----	-SSS-----ASPTVWDAIIRDLIHSS--TSVSIPLQIQNVRDIIIFPCNPNLGALLEYR 184
G3821_Ps	(481)	-----	VSSSPSMEETSATTNWIDGILKDLIHTS--NSVSIPQLINNVRREIIPPCNPNLALVLEHR 295
G3822_Zm	(482)	-----	AHAQAGGEATASTAWVDGIIRDIIGSSGGAASITQLIHNVREIIPHPCNPGLASLLELR 187
G2738_At	(483)	-----	YKVRSSMAEVAQKLEQLEMVLSN-----DDVG-STVLNDSVHYNPSDLSNWVES- 100
G3009_At	(484)	-----	YKVRSSDMADVAQKLEQLEMVLSN-----DIASSNAFNDTVHYNPSDLSGWAQS- 91
G307_At	(485)	-----	YKVRSSMAEVALKLEQLETMSNV-----QEDGLSHLATDTVHYNPSSELYSWLDN- 102
G308_At	(486)	-----	YKVRSSMADVAQKLEQLEMVMSNV-----QEDDLSQLATETVHYNPAELYTWLDS- 85
G309_At	(487)	-----	YKVRSSDMADVAHLEQLEMVLG-----DGISNLSDETIVHYNPSDLSGWVES- 86
G3816-Ta	(488)	-----	YKVRASDMADVAQKLEQLEMAMGMGVGAGAAPDDSFATHLATDTVHYNPTDLSWVES- 104
G3817_Os	(489)	-----	YKVRSSDMADVAQKLEQLEMAMGMGVGAPGAADDGFVSHLATDTVHYNPSDLSWVES- 105
G3818_Gm	(490)	-----	YKVRSSSELQHVAMERLENVMDIVN-----SSTNNNISQLASDTVFYFNPSDIGSWVD- 80
G3010_At	(491)	-----	EKYPSSSSASSVDHPERLASDSPDGSCGGAFFSDYASTTTTSSDHSWSDGLEN-RPS- 182
G3826_Le	(492)	-----	GSENNYSPQSVIINPHDSS-----FLSNYSPDSIESP---QWDLN----- 150
G644_At	(493)	-----	KKYPP-SPERNLAFAERNSE-----NLDREVPGNYTGDCIGFGNGGKPLSSG- 167
G3823_Os	(494)	-----	KAYPSSSKETAINGDSQADYP-----DNGSS--SYHEQACSGSFVSDLLGSQ----- 97
G3820_Os	(495)	-----	QVYPPSLNRLALHSANEPDTP-----DESSRNRYHNRYHSSHSSFNMLQPLPTP- 181
G1768_At	(496)	-----	-----MDNVR-----GSIMLQPLPEI- 16
G3815_Os	(497)	-----	YASSDDGSQKIGSSPQAFEAP-----YCTLESSSANGAHPAH-----SSASSHSISPI- 74
G3825_Le	(498)	-----	LENRPFGTSKFDGNSPLVNY-----FNSETFNTVSDYQEQP-----SCTENLSGASS- 74
G852_At	(499)	-----	YPSQSYEKYFLDSPTEFVQHPIGSGASVSSFGSLDSFFYQSRPVLGCSMEFQLPLDST- 123
G3819_Os	(500)	-----	QELDYYYRFYDVDEAAFDGNEVELVSRFSKVTMDHMISSPYQPTWSPAQAADVVGSS- 95
G1767_At	(501)	-----	SPQTAYHYNFPQNDVVVEECFNFFMDEEDLSSSSHHNNHNNPNNTYYSFFTPTQYHP- 94

FIG. 19E

ANNOTATED SHEET 1 SHOWING CHANGES

SEQ ID
Nos. added

</

FIG. 19F

G3810_Gm	(212)	-----	

G3811_Gm	(214)	-----	
G3824_Le	(220)	-----	
G922_At	(4)	-----	
G3812_Gm	(479)	-----	
G3814_Os	(218)	-----	
G3813_Os	(216)	-----	
G3827_Os	(222)	-----	
G306_At	(480)	DPSSSDPSPQTFE-----	PLYQI 210
G3821_Ps	(481)	AASNVNSSVKLMN-----	RVDDV 345
G3822_Zm	(482)	DPAPLPPPPQPOH-----	ALLHG 213
G2738_At	(483)	ELNNPASSDLDT-----	115
G3009_At	(484)	DLN--YYPDLDP-----	104
G307_At	(485)	ELNPPPLPASSNGL-----	119
G308_At	(486)	DLNPP-----SSN-----	96
G309_At	(487)	DLDPTRIQEKPD-----	101
G3816-Ta	(488)	ELNAPPPPLPPAP--QLNASTSS-----	TVTSGG 135
G3817_Os	(489)	ELNAPLPPIPPAPPAARHASTSS-----	TVTGGG 138
G3818_Gm	(490)	EFDQTAS-----	90
G3010_At	(491)	GVEEASKFLPKSSQLFIDVDSYIPMNSGSKENGSEVFVKTEKKDETEHHHHHSYAPPPNR	299
G3826_Le	(492)	GAVNVLSGSSN-----	SPTG 194
G644_At	(493)	EIEEANRFNPEENELIVNFR-----	EENC 241
G3823_Os	(494)	GVEEAKRFIPNIEKLVDDPEKN-----	GLYACKQTTETTE--QKGKHENK 162
G3820_Os	(495)	GAEAAKRFVPIIDKLVLDLTDTR-----	GLSISKMTTKAKVGDKKRYAIFE 262
G1768_At	(496)	-----	
G3815_Os	(497)	PLSHHDSHSDHT-----	89
G3825_Le	(498)	SSLDYNQYFHRP-----	89
G852_At	(499)	STRLLGDYQAVS-----	138
G3819_Os	(500)	RVRKKRFWDVLES-----	111
G1767_At	(501)	-----	

FIG. 19G

SEQ ID
NOs added

G3810_Gm	(212)	-----
G3811_Gm	(214)	-----
G3824_Le	(220)	-----
G922_At	(4)	-----MVAMFQEDNG 10
G3812_Gm	(479)	-----
G3814_Os	(218)	-----MFQDDML 7
G3813_Os	(216)	-----MVQDEGS 7
G3827_Os	(222)	-----MIT-FGL 6
G306_At	(480)	S-----NNPSPQQQQHQ-----QQQQHKP-----PPPIQQQERENS-ST 247
G3821_Ps	(481)	VPTSLHFSSTLLNQNNQNMFPNWGATQINNPNNSVSLVTLPSQLSTQQDQOH-QL 404
G3822_Zm	(482)	APAAAAGLTLPPPPPLPK-----RRHEHP-----PCQQQQQEEHPAPQS 256
G2738_At	(483)	-----TRSCVDRSEYDLRAI PGLSAFPKEEVF-----DEEASSKR 151
G3009_At	(484)	-----NRIC-----DLRPIT-----DDECCS-----SNSNSNR 129
G307_At	(485)	DPVLPSEICGFPAASYDLKVI PGNAIQFPAIDSSSSNNQNRLKSCSPDSMTSTS 179
G308_At	(486)	-----AEYDLKAIPGDAILNQFAIDSASSNQ-----GGDTYTTNKR 135
G309_At	(487)	-----SEYDLRAIPGSAVYPR-----DEHVTRRS 125
G3816-Ta	(488)	--YFDLPSPVSDSSSIYALRPIPSAGATAPADLSADSVRDPKRMRTGSSSTSSSSSSS 193
G3817_Os	(489)	SGFFELPAAADSSSSTYALRPISLPVATADPS-AADSARDTKRMRTGGSTSSSSSSS 197
G3818_Gm	(490)	-----LPYDFSDFLD-----
G3010_At	(491)	LTGKKSHWRDEDEDFVEERSNKQSAVYVEES-ELSEMFDKILVCGPGK-----PVC 350
G3826_Le	(492)	LREKKNRHR-GDVAADQQRSNKQMATFVHDESEPLEMYDNVLLCLNPN-----YV 243
G644_At	(493)	VSKARKNSSRDEICVEEERSKLPVAFGEDI-LRSDVVVKILVHVPGGESMKEFNALRDV 300
G3823_Os	(494)	IRNHDPHPVHEHIELMEARNSKHMAISTSET-IRDEMFD SILCN-RQLPG-----EVAN 215
G3820_Os	(495)	LTDQRHSPYTTDLDI LEGRNSKRYAITYCEI-IRNDMFDRLVLLCYGVENFA-----EASN 316
G1768_At	(496)	-----IDDAIC-HELMSWPFDDA-----
G3815_Os	(497)	-----YNPSPSASCVTEITDLQIKLRELENAILGPELDIAYDSP-----
G3825_Le	(498)	-----SPSEDHLP EAPYSRNMKHTLLQLESALMGPDKEAMKSSPYLGENMGAQTSGQRYK 144
G852_At	(499)	-----YSPSMDVVEEFDDEQMRSKIQELERALLGDEDDKMVGIDN-----
G3819_Os	(500)	-----CK 113
G1767_At	(501)	-----ATSST 99

FIG. 19H

SEQ ID
NOs: added

G3810_Gm	(212)	-----MMSL--SPSLGSPN-NLLFREMKSEERGLYLIHLLLTCAHVA--AG	42
G3811_Gm	(214)	-----MMSLSVSPSLGSP-----YHMKCELRLGLVLIHLLLAGANFVA--TG	39
G3824_Le	(220)	-----	
G922_At	(4)	TSSVASSPLQVFSTMSLNRPTLLASSSPFHCLKDLKPEERGLYLIHLLLTCAHVA--SG	68
G3812_Gm	(479)	-----MDGLGSPS--QWLRELWDSQGLNPISLLIDCAKCAVA--SG	37
G3814_Os	(218)	SSATS-----SPASSVYSPSPSPSNGSWVQELSHDQQSVRLIGLILLYQCAAEVS--AG	57
G3813_Os	(216)	SSSVTSSPLHNFNMPLHPAAAAAPTTPWMVRELRL-SDERGLCLIHLLLNCAAAAA--AG	64
G3827_Os	(222)	NSRPHPEFRNDLRPSSSSLAAGESESPKAVERLEREGCTRSRSSRRQPRGAAAAAL--AV	64
G306_At	(480)	DAPPQETVTATVPVQNTAEALRERKEEIKRQKQ-DEEGLHLLTLLLLQCAEAVS--AD	304
G3821_Ps	(481)	QQHP-EDLAPATTTTTSAEALARKKKEEIKEQKKKDEEGLHLLTLLLLQCAEAVS--AE	461
G3822_Zm	(482)	PKAPTAETAAAAAAQAAAAAAKERKEEQRRKQR-DEEGLHLLTLLLLQCAEAVN--AD	313
G2738_At	(483)	IRLG-----SWCESD-ESTRSVVLVDSQETGVRLVHALVACAEAIH--QE	194
G3009_At	(484)	IRLG-----PWCDSVTSESTRSVVLE--ETGVRLVQALVACAEAVQ--LE	171
G307_At	(485)	TGTQIGGVIGTIVTT--TTTTTAAAESTRSVILVDSQENGVRLVHALMACAEAIQ--QN	235
G308_At	(486)	LKCSNG-----VVETTTATAESTRHVVLDVDSQENGVRLVHALMACAEAVQ--KE	182
G309_At	(487)	K-----RTRIESELSSTRSVVLDVDSQETGVRLVHALMACAEAVQ--QN	166
G3816-Ta	(488)	SLGGGA-RSSVVEAAPVAAAANAT--PALPVVVVDVDTQEA GIRLVHALLACAEAVQ--QE	248
G3817_Os	(489)	SLGGGASRGSVVEAAPATQAAAAANAPVPPVVVDVDTQEA GIRLVHALLACAEAVQ--QE	255
G3818_Gm	(490)	-----LDTDQNQNHKPTLVTMEEEDSGIRLVHLLTMTCADSVQ--RG	138
G3010_At	(491)	LNQNPFTESAKVVTAQSNGAKIRGKKST-STSHSNDSSKKETADLRTLVLVCAQAVS--VD	407
G3826_Le	(492)	EQHSATSITSYSPNEAKKTSKVGRPRG-GRKHSSIVKKEMVDLRALLTQCAQAMA--NY	300
G644_At	(493)	LKKGVEKKKASDAQGGKRRRARGRGRGGGGQNGKKEVVVDLRSLLIHCAQAVA--AD	358
G3823_Os	(494)	LRGMMAKEASDNPKKFQSKGYGKGQKRP--HSSKKKQKEAIDLSVLLIQCAQAI--SN	270
G3820_Os	(495)	LRKIMTKQARKNSLNGQTR--GSAQRKL--RGMKQLKKDVVDLRNLLIHCAQAVA--AD	369
G1768_At	(496)	-----KDLLL-----IVEAISRGDLKLVLVACAKAVS--EN	64
G3815_Os	(497)	-----ESALQPNIMATPENWRQLLGINTGDLKQVLIACGKAVA--EN	168
G3825_Le	(498)	AWNKEAQVVRHQQSVVSIINGIQSDKRDNMEDLPLOQGVPSNNLKQLLIACARALA--EN	202
G852_At	(499)	LMEIDSEWSYQNESEQHQDSPKESSADSNHVSSEVVSQATPKQILISCARALS--EG	236
G3819_Os	(500)	QKVEAMEAMDTPATATFRVGAGDGGGGGGGAGGGGADGMRLVQLLVACAEAVA--CR	171
G1767_At	(501)	PSSTAAAAAALASPYSSSGHHNDPSAFSIPQTPPSDFSANAKWADSVLLEAARAFS--DK	157

FIG. 19I

G3810_Gm	(212)	NLENANTTLEQISMLASPDG--DTMQRIATYFMESLADRILKTPGIHR-----ALNS--	93
	(214)	DLQYAYLTLEQISQHASLDG--DTMQRIASYVSEALADRILKTPGIHR-----ALNS--	90
G3824_Le	(220)	-----MQRIASYFTEALADRILRSPWGLYK-----ALRS--	29
G922_At	(4)	SLQANAALEQLSHLASPDG--DTMQRIAAAYFTEALANRILKSWPGLYK-----ALNATQ	121
G3812_Gm	(479)	SIKNADIGLEYISQISSPDG--NAVQRMVYFSEALGYRIIKNLPGVYK-----SLNP--	88
G3814_Os	(218)	SFDRANLCLEHITQLASLDAP--HALQRLAAVFADALARLKLNLILGLSR-----ALLSS-	110
G3813_Os	(216)	RLDAANAALAHIASLAAPDG--DAMQRVAAAFAEALARRALRAWPGLCR-----ALLP-	116
G3827_Os	(222)	ASAPSLASCCRRPSIRKLLS--LPLHARVPPPGSGMRQPLRSPALHPR--GAAVAP-	119
G306_At	(480)	NLEEANKLLLEISQLSTPYG--TSAQRVAAAYFSEAMSARLLNSCLGIYAA----LPSRWM	358
G3821_Ps	(481)	NLEQANKMLLEISQLSTPFG--TSAQRVAAAYFSEISARLVSSCLGIYAT----LPVSSH	515
G3822_Zm	(482)	NLDDAHQTLLEIAELATPFG--TSTQRVAAAYFAEAMSARLVSSCLGLYAP----LPPGSP	367
G2738_At	(483)	NLNLADALVKRVGTLAGSQAG--AMGKVATYFAQALARRIYRDYTAETDVC-----	243
G3009_At	(484)	NLSLADALVKRVGLLAASQAG--AMGKVATYFAEALARRIYRIHPSA-----	216
G307_At	(485)	NLTAEALVKQIGCLAVSQAG--AMRKVATYFAEALARRIYRLSPQ-----	280
G308_At	(486)	NLTVAEALVKQIGFLAVSQIG--AMRQVATYFAEALARRIYRLSPSQ-----	227
G309_At	(487)	NLKLADALVKHVGLLASSQAG--AMRKVATYFAEGLARRIYRIYPRD-----	211
G3816_Ta	(488)	NLSAAEALVKQIPTLAASQGG--AMRKVAAAYFGEALARRVFRFPQDPS-----	295
G3817_Os	(489)	NFAAAEALVKQIPTLAASQGG--AMRKVAAAYFGEALARRVFRFP-ADS-----	301
G3818_Gm	(490)	DLAFAGSLIENMQGLLAHVNTNIGIKVAGYFIDALRRRILGQGVFQTLS-----	188
G3010_At	(491)	DRRTANEMLRQIREHSSPLGN--GSERLAHYFANSLEARLAGTGTQIYTA-----LS	457
G3826_Le	(492)	DSRTANELLMRIREHSTPHGD--GTERLAHYLANALEARLSGTGTALYTA-----YA	350
G644_At	(493)	DRRCAGQLLKQIRLHSTPFGD--GNQRLAHCFFANGLEARLAGTGSQIYKG-----IV	408
G3823_Os	(494)	NHPFASELLRKIRHHALPDGD--GSQRLANCFADGLEARLAGTGSQMYEK-----LM	320
G3820_Os	(495)	DRISASELVKKIRQHSSPDGD--SNQRLAFYLVDGLEARLAGIGSQVYRK-----LM	419
G1768_At	(496)	NLLMARWCMGELRGMVSIIGE--PIQRLGAYMLEGLVARLAASGSSIYKS-----LQ	114
G3815_Os	(497)	DVRLTELLISELGQMVSVSGD--PLQRLGAYMLEGLVARLSSSGSKIYKS-----LK	218
G3825_Le	(498)	KLDDFEILVAKARSVSVTGD--PIQRLGAYIVEGLVARKELSGTTIYRS-----LK	252
G852_At	(499)	KLEEALSMVNELRQIVSIQGD--PSQRIAAVMVEGLAARMAASGKFIYRA-----LK	286
G3819_Os	(500)	DRAQAAALLRELQACAPVHGT--AFQRVASCFVQGLADRLPLAHPALGPASMAFCIPPS	229
G1767_At	(501)	DTARAQQIILWTNLNELSSPYGD--TEQKLASYFLQALFNRMGTSGGERCYRT---MVTAAAT	212

FIG. 19J

SEQ ID
NO. added

G3810_Gm	(212)	TRMTLISDEILVQKLFELFPFLKVAFVLTNQAIIEAMEGEGK--VIHIIDLN----	AAEA	147
G3811_Gm	(214)	SRITMVSDEILVQKLFELFPFLKFSYILTNQAIIEAMEGEGK--MVHIVIDLY----	GAGP	144
G3824_Le	(220)	TKLSVVSEEEILVRKMFEEIFPFLKVAFVVTNQAIIEAMEGEGK--MVHIVIDLN----	AAEP	83
G922_At	(4)	TRTNVSEEEIHVRRLLFFEMFPILKVS YLLTNRAILEAMEGEGK--MVHIVIDLD----	ASEP	175
G3812_Gm	(479)	SKTSLSSSEDILVQKYFELCPFLKFSYILTNHAIIEAMECEK--VVHIIDLH----	CCEP	142
G3814_Os	(218)	ANSADAHLPVARRHMFDPFLKLAYLTNTNHAILEAMEGER--FVHVVDGSG--	PAANP	166
G3813_Os	(216)	RASPTPAEVAARRHFLDLCPFRLLAGAANQSILEAMESEK--IVHVIDLG----	GADA	170
G3827_Os	(222)	TRSPGAAVAGAEMRQQVSYC--WRPVRPPAGG--EEAGGEL--LLRGREL--		164
G306_At	(480)	PQT--HSLKMVS AFQVENGISPLVKFSHTANQAIQEA FEKED--SVHIIDLD----	IMQG	411
G3821_Ps	(481)	TP--HNQKVSAFQVENGISPFVKFSHTANQAIQEA FERE--RVHIIDLD----	IMQG	567
G3822_Zm	(482)	AAARLHGRVAAAFQVENGISPFVKFSHTANQAIQEA FERE--RVHIIDLD----	IMQG	421
G2738_At	(483)	--AAVNPSFE E VLEMHFYESCPYLKFAHFTANQAI LEAVTTAR--RVHVIDLG----	LNQG	296
G3009_At	(484)	--AAIDPSFE E ILQMNFDYDSCPYLKFAHFTANQAI LEAVTTSR--VVHVIDLG----	LNQG	269
G307_At	(485)	--NQIDHCLSDTLQMHFETCPYLKFAHFTANQAI LEAFEGKK--RVHVIDFS----	MNQG	333
G308_At	(486)	--SPIDHSLSDTLQMHFETCPYLKFAHFTANQAI LEAFQKKK--RVHVIDFS----	MSQG	280
G309_At	(487)	--DVALSSFSDTLQIHFYESCPYLKFAHFTANQAI LEVFATAE--KVHVIDLG----	LNHG	264
G3816_Ta	(488)	--SLDDAAFADLLHAHFYESCPYLKFAHFTANQAI LEAFAGCR--RVHVVDG----	IKQG	348
G3817_Os	(489)	--TLDDAAFADLLHAHFYESCPYLKFAHFTANQAI LEAFAGCH--RVHVVDG----	IKQG	354
G3818_Gm	(490)	--SSYPYEDNVLHYHYYEACPYLKFAHFTANQAI LEAFNGHD--CVHVIDFN----	LMQG	241
G3010_At	(491)	SKKTSAADMLKAYQTYMSVCPFKKAAIIFANHSMRFT--ANANTIHIIIDFG----	ISYG	511
G3826_Le	(492)	PSRISAAANILKAYKAFIRACPFKLLSNIFANKYIRKVI--AGAPKIHIIIDFG----	ILYG	404
G644_At	(493)	SKPRSA AAVLKAHQFLACCPFRKLSYFITNKTIRDLVG--NSQRVHVVIDFG----	ILYG	462
G3823_Os	(494)	AKQTSTRDMLKAYHLYFVACPFEMVTYYFSNKTIIDALEGKT--TLHIVIDG----	ILFG	374
G3820_Os	(495)	ASRTSAESLLKAYSLSYLSACPFERAS FAYANQTILDASKGQQRKVHVHVFHFG----	ICTG	475
G1768_At	(496)	SREPESYEFLSYVYLHEVCPYFKFGYMSANGAIAEAMKDEE--RIHIIDFQ----	IGQG	168
G3815_Os	(497)	CKEPTSSSELMSYMHLLEYICPFKFGYMSANGAIAEAIKGEN--FVHIIDFQ----	IAQG	272
G3825_Le	(498)	CKEPAGKDLFSYMYILYEICPYLKFGYMAANGAIVEACRNE--RIHIIDFQ----	IAQG	306
G852_At	(499)	CKEPPSDERLAAMQVLFEVCPFCFKFGFLAANGAILEAIKGE--EVHIIDFD----	INQG	340
G3819_Os	(500)	SCAGRDGARGEALALAYELCPYIRFAHFVANACMLEAFEGES--NVHVVDLGMTLGLDRG		287
G1767_At	(501)	EKTCSESTRKTVLKFEQVSPWATFGHVAAANGAILEAVDGEA--KIHIVIDIS----	STFC	266

FIG. 19K

SEQ ID
NOs: added

G3810_Gm	(212)	AQWIALRLVLSAHP--EGPPHLRITGVHKK-----EILDEVahrLTeeAEKLDI	195
G3811_Gm	(214)	AQWISLLQVLSARP--EGPPHLRITGVHKK-----EVLdQMAHKLTeEAEKLDI	192
G3824_Le	(220)	LQWRALLQDLSARP--EGPPHLRITGVHQQK-----EVLdQMAHVLTQEAeKLDI	131
G922_At	(4)	AQWLALLQAFNSRP--EGPPHLRITGVHQQK-----EVLQMAHRLIEEAeKLDI	223
G3812_Gm	(479)	TQWIDLLLTfKNRQ--GGPPHLKITGIHEKK-----EVLdQMNfHLTTeAGKLDf	190
G3814_Os	(218)	VQWIALFHAFGR--EGPPHLRITAVHDSK-----EFLANMAAVLSKEAAFDI	214
G3813_Os	(216)	TQWLELLHLLAARP--EGPPHLRLTSVHEHK-----ELLTQTAMALtKEAErLDV	218
G3827_Os	(222)	-LLLQLLLIYLVWD--GGTLLLELSIFFLL-----FCSLVtAMALtKEAErLDV	211
G306_At	(480)	LQWPGLFHILASRP--GGPPHVRLTGLGtSM-----EALQATGKRlSDfTDKlGL	459
G3821_Ps	(481)	LQWPGLFHILASRP--GGPPYVRLTGLGtSM-----ETLeATGKRlSDfFANKlGL	615
G3822_Zm	(482)	LQWPGLFHILASRP--GGPPRVRLTGLGASm-----EALeATGKRlSDfADTLGL	469
G2738_At	(483)	MQWPALMQALALRP--GGPPSFRLTGIGPPQ-T-----ENSDSLQQLGWKLAQFAQNMGV	348
G3009_At	(484)	MQWPALMQALALRP--GGPPSFRLTGVGn-P-----SNREGIQELGWKLAQLAQAIgV	319
G307_At	(485)	LQWPALMQALALRE--GGPPTfRLTGIGPPAP-----DnSDHLHeVGCKLAQLAEAIHV	385
G308_At	(486)	LQWPALMQALALRP--GGPPVfRLTGIGPPAP-----DnFDYLHeVGCKLAHLAEAIHV	332
G309_At	(487)	LQWPALIQALALRP--NGPPDFRLTGIGYSLT-----D-----IQEVGWKLGQLASTIGV	312
G3816_Ta	(488)	MQWPALLQALALRP--GGPPSFRLTGVPpQP-----DETdALQQVGWKLAQFAHTIRV	400
G3817_Os	(489)	MQWPALLQALALRP--GGPPSFRLTGVPpQP-----DETdALQQVGWKLAQFAHTIRV	406
G3818_Gm	(490)	LQWPALIQALALRP--GGPPLRLTGIGPPSS-----DNRDTLREIGLRlAElARSVnV	293
G3010_At	(491)	FQWPALIHRLSLSRP--GGSPKLRLTGIELPQRGF-----RPAAEFRRQVIAWLDTVSDTMF	566
G3826_Le	(492)	FQWPCLIQGLSMRA--GGPPELRITGIDLQPQGF-----KPAGRVEETGRRLEKYCKRFSV	458
G644_At	(493)	FQWPTLIHRFSMYG-----SPKVRLTGIEFPQPGF-----RPAQRVEETGQRlAAAYAKLFGV	514
G3823_Os	(494)	FQWPCLIQRLAKRE--GGPPKLRLTGVDVPQPGF-----RPhERIEETGKRlAEYANMFNV	428
G3820_Os	(495)	FQWPSLIQRLANEE--GGPPKLRLTGIDMPQPGF-----HPCEIIeETGKRlADYANLFKV	529
G1768_At	(496)	SQWIALIQAFaARP--GGAPNIRITGVGD-----GSVLTVTKRlEKLAKKFDV	215
G3815_Os	(497)	SQWMTLIQALARP--GGPPFLRLTGIDDSNSAY-----ARGGGLDIVGMRLYKVQASfGL	326
G3825_Le	(498)	TQWMTLLQALARP--GGAPYVRLTGIDDPVSQY-----ARGdGLAAVARRlSAISeEFNI	360
G852_At	(499)	NQYMTLIRSIAELP--GKRPRRLTGIDDPESVQ-----RSIGGLRIIGLRLEQLAEdNGV	394
G3819_Os	(500)	HQWRGLLDGLAARAS--GKPARVRVTGVGARMD-----TMRAIGRELEAYAEGLGM	336
G1767_At	(501)	TQWPTLLLEALATRS--DDTPHLRLTTVVVANKFVNDQTASHRMmKEIGNRMEKFARlMGV	324

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E L

FIG. 19L

G3810_Gm	(212)	SEQ ID NOs: added		246
G3810_Gm	(212)		PFQFN--PVASKLENLDFDKLR-----VKT GEALA ISSILQLHTLLAWDDEAMQRKSP	246
G3811_Gm	(214)		PFQFN--PVLSKLENLDFNKLr-----VKT GEALA ISSIMQLHSLALDEASRRKSP	243
G3824_Le	(220)		PFQFN--QVVSRLENLDVEKLR-----VKT GEALA ISSIMQLHTLLAHNDK---KSP	179
G922_At	(4)		PFQFN--PVSRLDCLNVEQLR-----VKT GEALA VSSVLQLHTFLASDDDLMRKNCA	274
G3812_Gm	(479)		PLQFY--PVSCKLEDVDFEKLr-----VKI GDALA ISSVLQLHSLLATDDDMAGRISP	241
G3814_Os	(218)		AFQFN--AVEAKLDEMDFDALRHDLG---VRS GEALA VSVVLQLHRLLAVDGDR--RHAA	267
G3813_Os	(216)		PFQFN--PVSRLDALDVESLR-----KT GEALA ICSSLQLHCLLASDDDA-----	263
G3827_Os	(222)		PFQFN--PVSRLDALDVESLR-----	231
G306_At	(480)		PFEFC--PLAEKVGNLDTERLN-----VRKREAVAVHWLQHSLYDVTGSDAH---	504
G3821_Ps	(481)		PFEFF--PVAEKVGNIDVEKLN-----VSKSEAVAVHWLQHSLYDVTGSDTN---	660
G3822_Zm	(482)		PFEFC--AAEAKAGNVDPKLG-----VTRREAVAVHWLHLSLYDVTGSDSN---	514
G2738_At	(483)		EFEFKG-LAAESLSDLEPEMFETRPE-----SETLVVNSVFELHRLRLARSG-----	393
G3009_At	(484)		EKFNG-LITTERLSDLEPDMFETRTE-----SETLVVNSVFELHPVLSQPG-----	364
G307_At	(485)		EFYRG-FVANSLADLDASMLELRPSD-----TEAVAVNSVFELHKLGRPG-----	431
G308_At	(486)		EFYRG-FVANTLADLDASMLELRPSE-----IESVAVNSVFELHKLGRPG-----	378
G309_At	(487)		NFEFKS-IALNNLSDLKPEMLDIRPG-----LESVAVNSVFELHRLLAHPG-----	357
G3816-Ta	(488)		DFQYRG-LVAATLADLEPFMLQPEGEEDPNEEPEVIAVNSVFEMHRLLAQPG-----	451
G3817_Os	(489)		DFQYRG-LVAATLADLEPFMLQPEGEADANEEPEVIAVNSVFELHRLLAQPG-----	457
G3818_Gm	(490)		RFAFRG-VAAWRLEDVKPWLQVNPn-----EAVAVNSIMQLHRLLASDSDPI-----	340
G3010_At	(491)		RLSTT--QLLRNGETIQVEDLKLr-----QGEYVVVNSLFRFRNLLDETVLVN-----	612
G3826_Le	(492)		PFVFK--AIAKKWESITLEELEVQ-----RDEVLVVNSLYRLGNIPDETVPVN-----	504
G644_At	(493)		PFEYK--AIAKKWDAIQLEDLDID-----RDEITVVNCLYRAENLHDES VKVE-----	560
G3823_Os	(494)		PFQYH--GIASRWETICIEDLSID-----KDEVLIINCMRMRKLGDETENID-----	474
G3820_Os	(495)		PFQYQ--GIASRWETVQIEDLNID-----KDEVLIINCMFRMKNLGDEMVMN-----	575
G1768_At	(496)		PFRFN--AVSRPSCSEVEVENLDVR-----DGEALGVNFAYMLHHLPPDESVSME-----	261
G3815_Os	(497)		PFEFN--AVPAAASHEVYLEHLDIR-----VGEVIVVNFAYQLHHTPDDES VSTE-----	372
G3825_Le	(498)		AVEFH--AVPVFAPEITWMDLVR-----PGEALAVNFPLQLHHTPDDESVDVN-----	406
G852_At	(499)		SFKFK--AMPSKTSIVSPSTLGCK-----PGETLI VNFAYQLHHPMPDES VTTV-----	440
G3819_Os	(500)		YLEFR--GINRGLESIHIDDLGVD-----ADEAVAINSVLELHSHVVKESRGALN-----	383
G1767_At	(501)		PFKFNIIHHVGDLSDFDLNELDVK-----PDEVLA INCVGAMHGIASRGs-----	369
	(661)		. : GEALA	

FIG. 19M

	SEQ ID Nos. added		
G3810_Gm	(212)	LLKSS-NGIHLQRLVPMGQSTLGDLLLEKDMVN-----	GYTPSPDSTSSSPSSLT 295
G3811_Gm	(214)	LLSKNS-NAIHLQKGLLMNHTLGDLLD-----	GYSPSPDSASSSPAASS 287
G3824_Le	(220)	LPFKHS-NGVNLNRALVN-QNTLGEFLEKDMAN-----	GCSPSNDTASSSPICST 227
G922_At	(4)	LRFQNNPSGVDLQRLVLMMSHGSAEARENDMSNN-----	GYSPSGDSASSLPSPSS 326
G3812_Gm	(479)	AAAASM-----NVQRALHMGQRTFAEWLERDMIN-----	AYTLSPDSALS-PLSLG 286
G3814_Os	(218)	AGCLTP-----VQIIARSSPRSGELLERELNTRLQLSPDASVVSLSLSPHSPAAATAAHP	322
G3813_Os	(216)	-----	AAVAGDKERRSPESGL 280
G3827_Os	(222)	-----	-----
G306_At	(480)	-----	-----
G3821_Ps	(481)	-----	-----
G3822_Zm	(482)	-----	-----
G2738_At	(483)	-----	-----
G3009_At	(484)	-----	-----
G307_At	(485)	-----	-----
G308_At	(486)	-----	-----
G309_At	(487)	-----	-----
G3816-Ta	(488)	-----	-----
G3817_Os	(489)	-----	-----
G3818_Gm	(490)	-----	-----
G3010_At	(491)	-----	-----
G3826_Le	(492)	-----	-----
G644_At	(493)	-----	-----
G3823_Os	(494)	-----	-----
G3820_Os	(495)	-----	-----
G1768_At	(496)	-----	-----
G3815_Os	(497)	-----	-----
G3825_Le	(498)	-----	-----
G852_At	(499)	-----	-----
G3819_Os	(500)	-----	-----
G1767_At	(501)	-----	-----

FIG. 19N

SEQ ID
NO. added

G3810_Gm	(212)	TNSRPRGRFLNALWGLSPKVMVTEQDCNHNGP-----	TLMDRLLEALYSYAALFDC	348
G3811_Gm	(214)	SALMNSES-FLNALWGLSPKVMVTEQDFNHNCL-----	TMMERLAEALFSYAAYFDC	339
G3824_Le	(220)	GS-TKMDS-FLNALWGLSPKVMVTEQDANHNGT-----	TLMERLSESLHFYAALFDC	278
G922_At	(4)	GR---TDS-FLNAIWGLSPKVMVTEQDSDHNGS-----	TLMERLLESlyTYAALFDC	375
G3812_Gm	(479)	AS--PKMGIFLNAIRKLQPLVITEQESNLNGS-----	NLMERVDRALYFYSALFDC	337
G3814_Os	(218)	TTSTPKLGSFLSAVRSLSPKIMVTEQEANHNGG-----	AFQERFDEALNYYASLFDC	375
G3813_Os	(216)	SPSTSRAADAFLGALWGLSPKVMVVAEQEASHNAA-----	GLTERFVEALNYYAALFDC	333
G3827_Os	(222)	-----GLSLKVMVTEQEVSHNAA-----	GLTERFVEALNYYAALFDC	269
G306_At	(480)	-----TLWLLQRLAPKVVTVVEQDLSHAG-----	SFLGRFVEAIHYYSALFDS	547
G3821_Ps	(481)	-----TLWLLQRLAPKVVTVVEQDLSNAG-----	SFLGRFVEAIHYYSALFDS	703
G3822_Zm	(482)	-----TLWLIQRLAPKVVTVVEQDLSHSG-----	SFLARFVEAIHYYSALFDS	557
G2738_At	(483)	-----SIEKLLNTVKAIKPSIVTVVEQEANHNGI-----	VFLDRFNEALHYYSLSLFS	441
G3009_At	(484)	-----SIEKLLATVKAIVKPLVTVVEQEANHNGD-----	VFLDRFNEALHYYSLSLFS	412
G307_At	(485)	-----GIEKVLGVVKQIKPVIFTVVEQESHNHNGP-----	VFLDRFTESLHYYSTLFS	479
G308_At	(486)	-----AIDKVLGVVNQIKPEIFTVVEQESHNHNSP-----	IFLDRFTESLHYYSTLFS	426
G309_At	(487)	-----SIDKFLSTIKSIRPDIMTVVEQEANHNGT-----	VFLDRFTESLHYYSLSLFS	405
G3816-Ta	(488)	-----ALEKVLGTVRAVRPRIVTVVEQEANHNSG-----	TFLDRFTESLHYYSTMFDS	499
G3817_Os	(489)	-----ALEKVLGTVHAVRPRIVTVVEQEANHNSG-----	SFLDRFTESLHYYSTMFDS	505
G3818_Gm	(490)	-----GSGIETVLGWIRSLNPKIISVVEQEANHNDQ-----	RFLERFTEALHYYSTVFS	390
G3010_At	(491)	-----SPRDAVLKLRKINPNVFIIPAILSGNYPAP-----	FFVTRFREALFHYSAVDM	661
G3826_Le	(492)	-----SPRDAVLNLRIRIPDLFIHGALNGTFNTP-----	FFVTRFREALFHFSSLYDM	553
G644_At	(493)	-----SCRDTVLNLGKINPDLFVFGIVNGAYNAP-----	FFVTRFREALFHFSSIFDM	609
G3823_Os	(494)	-----SARDRVLHMMKRMNPQVFI LGVNGLYSSP-----	FFLTRFREVLPHYSSSLFDM	523
G3820_Os	(495)	-----SARDRVLKIMRMNPRVFI LGIVNGSYSSP-----	FFITRKEVLPHYSSSLFDM	624
G1768_At	(496)	-----NHRDRLLRMVKSLSPKVVTLVEQECNTNTS-----	PFLPRFLETLSYYTAMFES	310
G3815_Os	(497)	-----NHRDRILRMVKSLSPLRLVTLVEQESNTNTR-----	PFFPRYLETLDYYTAMFES	421
G3825_Le	(498)	-----NPRDGLIRMIKSLSPKIVTLVEQESNTNTA-----	PFLPRFVEALDYYHAMFES	455
G852_At	(499)	-----NQRDELLHMVKSLSNPKLVTVVEQDVNTNTS-----	PFFPRFIEAYEYSAVFES	489
G3819_Os	(500)	-----SVLQTIKLSPRAFLVVEQDAGHNGP-----	FFLGRFMEALHYAALFDA	428
G1767_At	(501)	-----PRDAVISSFRRLRPRIVTVVEEEADLVGEEGGDFDEFLRGFGEC	LRWFRVCVES	424

: MV . : :C

FIG. 190

SEQ ID NOs: added		
	SEQ ID	NOs: added
G3810_Gm	(212)	LEST-----VSRTSLERLRVEKMLFGEEIKNI IACE-GSERKERHEKLEK 392
G3811_Gm	(214)	LEST-----VSRASMDRLKLEKMLFGEEIKNI IACE-GCERKERHEKMDR 383
G3824_Le	(220)	LEST-----LPRTSLERLKVVEKMLLGGEEIRNI IACE-GIERKERHEKLEK 322
G922_At	(4)	LETK-----VPRTSQDRIKVVEKMLFGEEIKNI ISCE-GFERRERHEKLEK 419
G3812_Gm	(479)	LDST-----VMKTSVERQKLESKLLGEEIKNI IACE-GVDRKERHEKLEK 381
G3814_Os	(218)	LQRS-----AAAAA-ERARVERVLLGEEIRGVVACE-GAERVERHERARQ 418
G3813_Os	(216)	LEVG-----AAGSVRARVERVLLGEEIKNIVACD-GGERRERHERLER 377
G3827_Os	(222)	LEVG-----GARGSVETRVERVLLGEEIKNIVACD-GGERRERHER--- 310
G306_At	(480)	LGAS-----YGESEERHVVEQQLLSKEIRNVAVG-GPSR-SGEVKFES 590
G3821_Ps	(481)	LGSS-----YGESEERHVVEQQLLSREIRNVAVG-GPSR-SGEIKFHN 746
G3822_Zm	(482)	LDAS-----YGEDSPERHVVEQQLLSREIRNVAVG-GPAR-TGDVKFGS 600
G2738_At	(483)	LED-----SYSLPSQDRVMSEVYLGRQILNVAAE-GSDRVERHETAAQ 484
G3009_At	(484)	LED-----GVVIPSQDRVMSEVYLGRQILNLVATE-GSDRIERHETLAQ 455
G307_At	(485)	LE-----GVPNSQDKVMSEVYLKGQICNLVACE-GPDRVERHETLSQ 520
G308_At	(486)	LE-----GVPSSQDKVMSEVYLKGQICNVVACD-GPDRVERHETLSQ 467
G309_At	(487)	LE-----GPP-SQDRVMSELFLGRQILNLVACE-GEDRVERHETLNQ 445
G3816-Ta	(488)	LEGSSGGPSEVSSGAAAAPAAAGTDQVMSEVYLGRQICNVVACE-GAERTERHETLGQ 558
G3817_Os	(489)	LEGSSG--QAE LSP--PAAGGGGTDQVMSEVYLGRQICNVVACE-GAERTERHETLGQ 560
G3818_Gm	(490)	LEA-----CPVEPKALAEMLYQREICNVVSSE-GPARVERHEPLAK 431
G3010_At	(491)	CDSK-----LAREDEMRLMYEKEFYGREIVNVVACE-GTERVERPETYKQ 705
G3826_Le	(492)	FEAT-----LPREDEDRKLFEEVFARDAMNV IACE-GTERVERPETYKQ 597
G644_At	(493)	LETI-----VPREDEERMFLEMEVFGREALNV IACE-GWERVERPETYKQ 653
G3823_Os	(494)	LDNN-----VPRNHEARILVEKDLFGNDALNAVACE-GAERIERPESYKQ 567
G3820_Os	(495)	IDAN-----VPRDNEARKMIEGGLFGQEALNI IACE-GAERTERPESYKQ 668
G1768_At	(496)	IDVM-----LPRNHKERINIEQHCHMARDVNI IACE-GAERIERHELLGK 354
G3815_Os	(497)	IDVA-----LPRDDKRMSAEQHCVARDIVNL IACE-GAERVERHEVFGK 465
G3825_Le	(498)	IDVT-----LLRDMKERINVEQHCLARDIVNV IACE-GKERVERHELLGK 499
G852_At	(499)	LDMT-----LPRESQERMNVVERQCLARDIVNV IACE-GEERIEREAAAGK 533
G3819_Os	(500)	LDAA-----LPRYDARRARVEQHFHGAEIRNVV GCE-GAARVERHERADQ 472
G1767_At	(501)	WEES-----FPRTSNERLMLER-AAGRAIVDLVACE-PSDSTERRETARK 467

GE . :

FIG. 19P

SEQ ID
Nos. added

G3810_Gm	(212)	WFQRFDLAGFGNVPLSYFGMVQARRFLQSYGCEG-YRMRDENG--CVLICWEDRPMYSIS	449
G3811_Gm	(214)	WIQRDLSGFANVPISYYGMLQRRFLQTYGCEG-YKMREECG--RVMICWQERSLFSIT	440
G3824_Le	(220)	WFQRFDTSGFNVPLSYIAMLQARRLLQSYSCG-YKIKEDNG--CVVICWQDRPLFSVS	379
G922_At	(4)	WSQRIDLAGFNVPLSYIAMLQARRLLQCGGFDG-YRIKEESG--CAVICWQDRPLYSVS	476
G3812_Gm	(479)	WIRREMAGFVKVPLSYNGRLEAKNLLQRYSNK--YKFREEEND--CLLVCWSDRPLFSRA	437
G3814_Os	(218)	WAARMEAAGMERVGLSYSGAMEARKLLQSCGWAGPYEVHRDAGHGFFCWHKRPLYAVT	478
G3813_Os	(216)	WARRLEGAGFGRVPLSYAYALLQARRVAQGLGCDG-FKVREEKG--NFFLCWQDRALFSVS	434
G3827_Os	(222)	----LEGAGFGRVPLSYAYALLQARRVAQGLGCDG-FKVREEKG--NFFLCWQDRALFSVS	363
G306_At	(480)	WREKMQCCGFKGISLAGNAATQATLLGMFPSDG-YTLVDDNG--TLKLGWKDLSLLTAS	647
G3821_Ps	(481)	WREKLQCCGFRGVSLAGNAATQASLLGMFPSEG-YTLVEDNG--ILKLGWKDLCLLTAS	803
G3822_Zm	(482)	WREKLAQSGFRAASLAGSAAQAASLLGMFPSDG-YTLVEENG--ALKLGWKDLCLLTAS	657
G2738_At	(483)	WIRMKSAQFDPIHLGSSAFKQASMLLSLYATGDGYRVEENDG--CLMIGWQTRPLITTS	542
G3009_At	(484)	WRKRMGSAGFDPVNLGSDAFKQASLLLSLGGDGYRVEENDG--SLMLAWQTKPLIAAS	513
G307_At	(485)	WGNRFGSSGLAPAHLGSNAFKQASMLLSVFNSSGQGYRVEESNG--CLMLGWHTRPLITTS	578
G308_At	(486)	WNRNFGSAGFAAAHIGSNAFKQASMLLALFNNGEGYRVEESDG--CLMLGWHTRPLIATS	525
G309_At	(487)	WNRNFGLGFKPVSIGSNAYKQASMLLALYAGADGYNVEENEG--CLLLGWQTRPLIATS	503
G3816_Ta	(488)	WNRNLGNAGFETVHLGSNAYKQASTLLALFAGGDGYKVEEKEG--CLTLGWHTRPLIATS	616
G3817_Os	(489)	WNRNLGRAGFEPVHLGSNAYKQASTLLALFAGGDGYRVEEKEG--CLTLGWHTRPLIATS	618
G3818_Gm	(490)	WRERLEKAGFKPLHLGSNAYKQASMLLTLS-AEGYSVEENQG--CLTLGWHSRPLIAAS	488
G3010_At	(491)	WQARLIRAGFRQLPLEKELMQLKLIENGYD-KNFDVDQNGN--WLLQGWKGRIVYASS	762
G3826_Le	(492)	WQLRCVRAGFKQVPLDQEIIVKIVRNKVRSEYH-RDFSVDDEDGH--WMLQGWKGRVIYALS	654
G644_At	(493)	WHVRAMRSGLVQVPFDPSPIMKTSLHKVHTFYH-KDFVIDQDNR--WLLQGWKGRVTMALS	710
G3823_Os	(494)	WQMRILRAGFKQRPVNQAILNRSVHYKE-FYH-EDFVIDEDSG--WLLQGWKGRIIQALS	623
G3820_Os	(495)	WQARCLKAGFKQLPVDPATLKEIINMKKGIYH-EDFVADEDA--WLLQGWKGRVIYAIS	725
G1768_At	(496)	WKSFRSMAGFEPYPLS-SIISATIRALLRD-YSNGYAIEERDG--ALYLGWMDRILVSSC	410
G3815_Os	(497)	WKARLTMAGFRPYPLS-SVNVNSTIKTLTHT-YNSFYRLEERDG--VLYLGWKNRVLVSS	521
G3825_Le	(498)	WKSFRFMMAGFQQYPLS-SYVNSVIKDLMKR-YSEHYTLVEKDG--AMLLGWKERNLVSAS	555
G852_At	(499)	WRARMMMAGFNPKPMS-AKVTNNIQNLIKQQYCNKYKLKEEMG--ELHFCWEEKSLIVAS	590
G3819_Os	(500)	WRRRMSRAGFSQSVPIKMAAKAR--EWLDENAGGGGYTVAEEKG--CLVLGWKGKPVIAAS	528
G1767_At	(501)	WSSRRMNSGFGAVGYSDEVADDDRALLRRRYKEGVWSMVQCPDAA-GIFLCWRDQPVVWAS	526

* : SY RR Q C* :

FIG. 19Q

SEQ ID
NO. added

G3810_Gm	(212)	AWRSRK	455
G3811_Gm	(214)	AWRPRK	446
G3824_Le	(220)	SWCRK	385
G922_At	(4)	AWCRK	482
G3812_Gm	(479)	EF	439
G3814_Os	(218)	AWRPAASRRGHTLH	508
G3813_Os	(216)	AWGRRF	442
G3827_Os	(222)	AWGRRFAALLPLPPSTPLPCSRVIATLLSSPPPCSLHPYCPERRRMKGKKGKRE	422
G306_At	(480)	AWTPRS	653
G3821_Ps	(481)	AWRPPYHTNTIIPHHN	819
G3822_Zm	(482)	AWRPIQVPPCR	668
G2738_At	(483)	AWKLA	547
G3009_At	(484)	AWKLAAELRR	523
G307_At	(485)	AWKLSTAHH	587
G308_At	(486)	AWKLSTN	532
G309_At	(487)	AWRINRVE	511
G3816-Ta	(488)	AWRLAGP	623
G3817_Os	(489)	AWRVAAA	625
G3818_Gm	(490)	AWQAAPMQDRETLRFEQ	505
G3010_At	(491)	LWVP	769
G3826_Le	(492)	TKQSVKLV	666
G644_At	(493)	ESKA	718
G3823_Os	(494)	ET	629
G3820_Os	(495)	NESYLDQ	736
G1768_At	(496)	AWK	413
G3815_Os	(497)	AWC	524
G3825_Le	(498)	AWF	558
G852_At	(499)	AWR	593
G3819_Os	(500)	CWKC	532
G1767_At	(501)	AWRPT	531

FIG. 19R

SEQ ID
NOs added

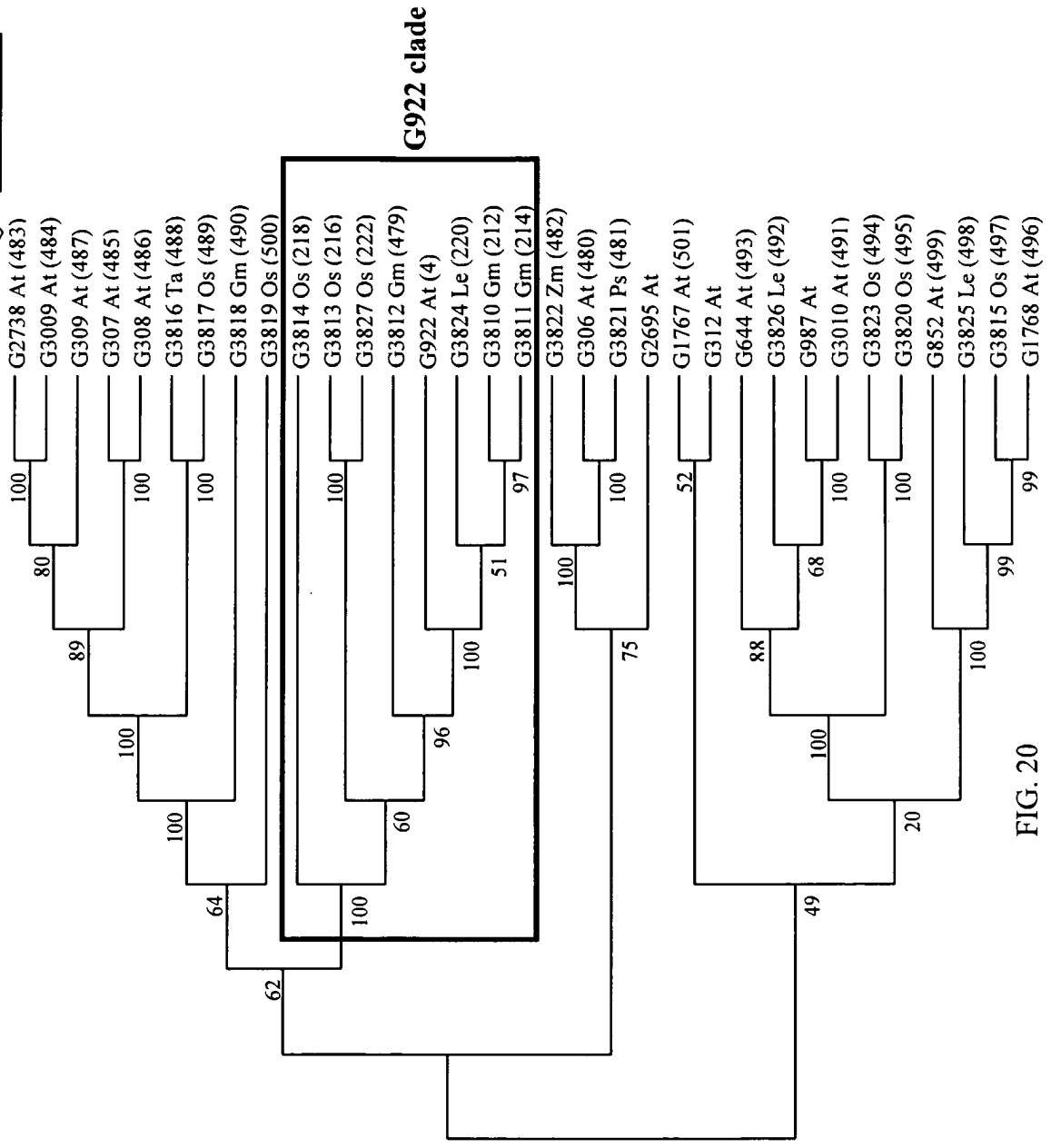


FIG. 20

	SEQ ID Nos. added	10	20
G3728_Z_mays(148)			
G3804_Z_mays(210)			
G3802_S_bicolor(206)			
G3727_Z_mays(146)			
G3721_O_sativa(134)			
G3730_O_sativa(152)			
G3719_Z_mays(130)			
G3725_O_sativa(142)			M A A A A
G3722_Z_mays(136)			
G3733_H_vulgare(158)			M A A V G
G3726_O_sativa(144)			M A A V G
G3720_Z_mays(132)			M A A V G
G3729_O_sativa(150)		M S S L Y P S L L S L	
G3797_L_sativa(204)			
G3795_C_anuum(202)			
G1275_A_thaliana(30)			
G1274_A_thaliana(6)			
G1758_A_thaliana(32)			
G3732_S_tuberosum(156)			
G3731_L_esculentum(154)			
G3724_G_ma(140)			
G3723_G_ma(138)			
G3803_G_ma(208)			
G194_A_thaliana(527)		M E F T D F S K T S F Y Y P S S Q -	
G2517_A_thaliana(529)	M E N V G V G M P F Y D L G Q T R V Y P L L S - -		
G179_A_thaliana(531)			
G2688_A_thaliana(533)			
G1956_A_thaliana(535)	M G A I N Q G I S L F D E S Q T V I N P I N T N		
G181_A_thaliana(537)			
G1931_A_thaliana(539)			
G1012_A_thaliana(541)			
G1420_A_thaliana(543)	M E K K K E E D H H H Q Q Q Q Q Q K E I K N T		
G2290_A_thaliana(545)	M N - - - D P D N P D - - - - - - - L S N -		
G2575_A_thaliana(547)	M D D H V E H N Y N T S L E E V H F K - -		
G195_A_thaliana(549)	M S H E I K D L N N Y H Y T S S Y N H Y N I N N Q		
G187_A_thaliana(551)	M S N E T R D L Y N Y Q Y P S S F S L H E M M N L		
G1013_A_thaliana(553)			

FIG. 22A

	SEQ ID Nos. added	40	50
G3728_Z_mays(148)			M A T
G3804_Z_mays(210)			M A T
G3802_S_bicolor(206)			M Q M A A
G3727_Z_mays(146)			M A A
G3721_O_sativa(134)			M A A
G3730_O_sativa(152)		M A A S L G L C H	
G3719_Z_mays(130)			M A
G3725_O_sativa(142)	A G A S T P F N F C R H G S H A E Y D A V F S G S		
G3722_Z_mays(136)		M H M A L S S R S S F A	
G3733_H_vulgare(158)	A A P V L Y Q Q Q - - - - A Q A V G D A C F F S S		
G3726_O_sativa(144)	A H A A V Y H H P V S G L S A P A G D A A Y - - S		
G3720_Z_mays(132)	A H P V L Y H H P - - - - - A P A G D A S - - - S		
G3729_O_sativa(150)	S - - - - - - - - - - - E S P A E Y R Q V G G		
G3797_L_sativa(204)		M N Y Y D H Q M S K A	
G3795_C_anuum(202)			M L D
G1275_A_thaliana(30)		M N D A D T N L G	
G1274_A_thaliana(6)			M N I
G1758_A_thaliana(32)			M N Y
G3732_S_tuberosum(156)		M E N F P Y S	
G3731_L_esculentum(154)		M E N F P Y S	
G3724_G_max(140)		M D F Y F G	
G3723_G_max(138)		M D Y Y F G	
G3803_G_max(208)		M D Y Y F G	
G194_A_thaliana(527)	- - - - - - - - - - - S V W D F G D L A A A		
G2517_A_thaliana(529)	- - - - - - - - - - - - - - D F H D L S A -		
G179_A_thaliana(531)			
G2688_A_thaliana(533)			
G1956_A_thaliana(535)	H L G F F F S F P S H S T L S S S S S S S S S S P		
G181_A_thaliana(537)			M
G1931_A_thaliana(539)			M E
G1012_A_thaliana(541)			
G1420_A_thaliana(543)	E T K I - - - - - - - - E Q E Q E Q E Q K Q E I S		
G2290_A_thaliana(545)	- - - - - - - - - - - - - - D D S A W R E L T		
G2575_A_thaliana(547)	- - - - - - - - - - - - - - S L S D - - - -		
G195_A_thaliana(549)	N M I N L P Y V S G P S A Y N A N M I S S S S Q V G		
G187_A_thaliana(551)	P T S N P S S Y G N L P S Q N G F N P S T Y S F T		
G1013_A_thaliana(553)		M E E E G Y Q W A	

FIG. 22B

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	SEQ ID NOs added	60	70
G3728_Z_mays(148)	S L G L N P E D L F T S	- - - - -	- - - - -
G3804_Z_mays(210)	S L G L N P E D L F T S	- - - - -	- - - - -
G3802_S_bicolor(206)	S L G L N P E A L F A S	- - - - -	- - - - -
G3727_Z_mays(146)	S L G L N P E A V F T S	- - - - -	- - - - -
G3721_O_sativa(134)	S V G L N P E A F F F S	- - - - -	- - - - -
G3730_O_sativa(152)	E T S Y A Y S Y P A S N	- - - - -	- - - - -
G3719_Z_mays(130)	D D Y F Q F G F T G Q E	- - - - -	- - - - -
G3725_O_sativa(142)	W M A R R P S A A P H G	- - - - -	- - - - -
G3722_Z_mays(136)	A D V L L P A T M S Y R	- - - - -	- - - - -
G3733_H_vulgar(158)	M S S Y F S N E A I S S	- - - - -	- - - - -
G3726_O_sativa(144)	M S S Y F S H G G - S	- - - - -	- - - - -
G3720_Z_mays(132)	M S S Y F S H G G - S S	- - - - -	- - - - -
G3729_O_sativa(150)	G R Y A G E D V V D D D	- - - - -	- - - - -
G3797_L_sativa(204)	Y S Y R S V D S P D M D	- - - - -	- - - - -
G3795_C_annuum(202)	G S F R S L D S P D S D	- - - - -	- - - - -
G1275_A_thaliana(30)	S S F S D D T H S V F E F P	- - - - -	- - - - -
G1274_A_thaliana(6)	S Q N P S P N F T Y F S D E	- - - - -	- - - - -
G1758_A_thaliana(32)	P S N P N P S S T D F T	- - - - -	- - - - -
G3732_S_tuberosum(156)	S S N P N P N - - - -	- - - - -	- - - - -
G3731_L_esculentum(154)	S S N P N P N - - - -	- - - - -	- - - - -
G3724_G_max(140)	N S P P Y P N - N Y A H	- - - - -	- - - - -
G3723_G_max(138)	N L N P N P Y - Y H H S	- - - - -	- - - - -
G3803_G_max(208)	N P N P K P Y D N R H S	- - - - -	- - - - -
G194_A_thaliana(527)	E R H S L G F M E L L S	- - - - -	- - - - -
G2517_A_thaliana(529)	E R Y P V G F M D L L G	- - - - -	- - - - -
G179_A_thaliana(531)	M E D R	- - - - -	- - - - -
G2688_A_thaliana(533)	M E G Y D	- - - - -	- - - - -
G1956_A_thaliana(535)	S S L V S P F L G H N S L N S F L H N	- - - - -	- - - - -
G181_A_thaliana(537)	D R E D I N P M L S R L	- - - - -	- - - - -
G1931_A_thaliana(539)	G V D N T N P M L T L E	- - - - -	- - - - -
G1012_A_thaliana(541)			
G1420_A_thaliana(543)	Q A S S S S N M A N L V T S S D H H P L E L A G N		
G2290_A_thaliana(545)	L T A Q D S D F F D R	- - - - -	- - - - -
G2575_A_thaliana(547)	- C L Q S S L V M D Y N	- - - - -	- - - - -
G195_A_thaliana(549)	F D L P S K N L S P Q G	- - - - -	- - - - -
G187_A_thaliana(551)	D C L Q S S P A A Y E S	- - - - -	- - - - -
G1013_A_thaliana(553)	R R C G N N A V E D P F	- - - - -	- - - - -

FIG. 22C

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Reply to Office action of 11 December 2008
ANNOTATED SHEET SHOWING CHANGES

	SEQ ID		0		90		100																		
	NOs. added																								
G3728_Z_mays(148)	-	-	-	-	Y	S	S	S	Y	Y	S	S	P	P	F	M	S	D	Y	A	A	S	F	T	P
G3804_Z_mays(210)	-	-	-	-	Y	S	S	S	Y	Y	S	S	P	P	F	M	S	D	Y	A	A	S	F	T	P
G3802_S_bicolor(206)	-	-	-	-	Y	S	S	A	Y	S	S	S	P	F	V	S	D	Y	A	A	S	F	P	A	
G3727_Z_mays(146)	-	-	-	-	Y	T	S	S	P	-	-	P	F	M	S	D	Y	V	A	A	S	F	L	P	P
G3721_O_sativa(134)	-	-	-	-	N	S	Y	S	Y	S	-	S	P	F	M	A	S	Y	T	P	E	F	S	A	
G3730_O_sativa(152)	-	-	-	-	T	S	S	S	L	C	F	P	P	L	M	A	D	H	I	V	D	G	-	-	-
G3719_Z_mays(130)	-	-	-	-	M	V	A	D	D	C	S	A	P	V	F	A	N	S	S	S	D	A	V	T	A
G3725_O_sativa(142)	-	-	-	-	G	G	A	S	G	S	G	S	G	S	G	-	Y	G	A	A	S	Y	V	A	P
G3722_Z_mays(136)	-	-	-	-	Q	P	C	S	G	A	S	S	Y	L	G	S	Q	P	A	A	P	F	P	S	A
G3733_H_vulgare(158)	-	-	-	-	S	C	S	S	P	A	S	S	F	S	A	A	L	G	A	T	P	P	A	A	P
G3726_O_sativa(144)	-	-	-	-	S	T	S	S	S	A	S	S	F	S	A	A	L	A	A	A	T	T	P	P	L
G3720_Z_mays(132)	-	-	-	-	T	T	S	S	S	A	S	S	F	T	A	A	L	A	P	T	T	T	A	L	A
G3729_O_sativa(150)	-	-	-	-	D	D	M	A	A	V	A	D	A	V	S	S	Y	L	S	F	D	M	D	D	V
G3797_L_sativa(204)	-	-	-	-	Y	D	V	P	N	Q	Q	T	Y	E	F	V	E	S	F	L	S	F	D	D	W
G3795_C_anuum(202)	-	-	-	-	D	F	S	N	H	L	I	N	F	E	L	S	D	I	L	E	I	D	N	W	
G1275_A_thaliana(30)	-	-	-	E	L	D	L	S	D	E	W	M	D	D	D	L	V	S	A	V	S	G	M	N	Q
G1274_A_thaliana(6)	-	-	-	N	F	I	N	P	F	M	D	N	N	D	F	S	N	L	M	F	F	D	I	D	E
G1758_A_thaliana(32)	-	-	-	-	-	E	F	F	K	F	D	D	F	D	D	T	F	E	K	I	M	E	E	I	
G3732_S_tuberosum(156)	-	-	-	-	F	I	D	A	-	S	E	N	F	E	L	S	D	Y	N	Y	L	F	L	D	D
G3731_L_esculentum(154)	-	-	-	-	F	I	D	A	-	S	E	N	F	E	L	S	D	Y	N	Y	L	F	L	D	D
G3724_G_max(140)	-	-	-	N	S	L	N	M	A	L	S	S	P	E	I	A	L	S	D	Y	L	M	L	D	D
G3723_G_max(138)	-	-	-	A	V	V	N	M	A	S	P	S	S	E	F	M	L	S	D	Y	L	V	L	E	D
G3803_G_max(208)	-	-	-	A	V	V	N	T	E	S	P	S	S	E	F	M	L	S	D	Y	L	V	L	E	D
G194_A_thaliana(527)	-	-	-	-	-	-	S	Q	Q	H	Q	D	F	A	T	V	S	P	H	S	F	L	L	Q	
G2517_A_thaliana(529)	-	-	-	-	-	-	V	H	R	H	T	P	T	H	T	P	-	-	-	-	-	-	-	-	
G179_A_thaliana(531)	-	-	-	-	-	R	C	D	V	L	F	P	C	S	S	S	V	D	P	R	L	T	E	F	
G2688_A_thaliana(533)	-	-	-	-	-	N	G	S	L	Y	A	P	F	L	S	L	K	S	H	S	K	P	E	L	
G1956_A_thaliana(535)	-	-	-	-	N	P	S	S	F	I	S	H	P	Q	D	S	I	N	L	M	T	N	L	P	E
G181_A_thaliana(537)	-	-	-	-	-	D	V	E	N	N	N	T	F	S	S	F	V	D	K	T	L	M	M	M	
G1931_A_thaliana(539)	-	-	-	-	-	E	G	E	N	N	N	P	F	S	S	L	D	D	K	T	L	M	M	M	
G1012_A_thaliana(541)																									
G1420_A_thaliana(543)	L	S	S	I	F	D	T	S	S	L	P	F	P	Y	S	Y	F	E	D	H	S	S	N	N	P
G2290_A_thaliana(545)	-	-	-	-	D	T	S	N	I	L	S	D	F	G	W	N	L	H	H	S	S	D	H	P	
G2575_A_thaliana(547)	-	-	-	S	L	E	K	V	F	K	F	S	P	Y	S	S	P	F	Q	S	V	S	P	S	V
G195_A_thaliana(549)	-	-	-	A	F	E	L	G	F	E	L	S	P	S	S	S	D	F	F	N	P	S	L	D	Q
G187_A_thaliana(551)	-	-	-	L	L	Q	K	T	F	G	L	S	P	S	S	S	E	V	F	N	S	S	I	D	Q
G1013_A_thaliana(553)	-	-	-	V	Y	E	P	P	L	F	F	L	P	Q	D	Q	H	H	M	H	G	L	M	P	N

FIG. 22D

	SEQ ID	No. added	110	120
G3728_Z_mays(148)	A A G	- - - - -	- - - - -	- - - - -
G3804_Z_mays(210)	A G G	- - - - -	- - - - -	- - - - -
G3802_S_bicolor(206)	A V D	- - - - -	- - - - -	- - - - -
G3727_Z_mays(146)	A V V	- - - - -	- - - - -	- - - - -
G3721_O_sativa(134)	A A I	- - - - -	- - - - -	- - - - -
G3730_O_sativa(152)	G G G	- - - - -	- - - - -	- - - - -
G3719_Z_mays(130)	A V G	- - - - -	- - - - -	- - - - -
G3725_O_sativa(142)	T F G A A F	- - - - -	- - - - -	- - - - -
G3722_Z_mays(136)	A F G A V	- - - - -	- - - - -	- - - - -
G3733_H_vulgare(158)	A I S P D	- - - - -	- - - - -	- - - - -
G3726_O_sativa(144)	P D P S	- - - - -	- - - - -	- - - - -
G3720_Z_mays(132)	- - - - -	- - - - -	- - - - -	- - - - -
G3729_O_sativa(150)	E Y Y	- - - - -	- - - - -	- - - - -
G3797_L_sativa(204)	I T E	- - - - -	- - - - -	- - - - -
G3795_C_anuum(202)	P I Q	- - - - -	- - - - -	- - - - -
G1275_A_thaliana(30)	S Y G Y	- - - - -	- - - - -	- - - - -
G1274_A_thaliana(6)	G G N	- - - - -	- - - - -	- - - - -
G1758_A_thaliana(32)	G R E	- - - - -	- - - - -	- - - - -
G3732_S_tuberosum(156)	G S N	- - - - -	- - - - -	- - - - -
G3731_L_esculentum(154)	G S S	- - - - -	- - - - -	- - - - -
G3724_G_ma(140)	Y V D	- - - - -	- - - - -	- - - - -
G3723_G_ma(138)	A L V V D	- - - - -	- - - - -	- - - - -
G3803_G_ma(208)	A V D	- - - - -	- - - - -	- - - - -
G194_A_thaliana(527)	T S Q P Q T Q T Q P S A K L S S S I I Q A P P S E	- - - - -	- - - - -	- - - - -
G2517_A_thaliana(529)	- - - - -	- - - - -	- - - - -	- - - - -
G179_A_thaliana(531)	H - - - - -	- - - - -	- - - - -	- - - - -
G2688_A_thaliana(533)	H Q - - - - -	- - - - -	- - - - -	- - - - -
G1956_A_thaliana(535)	T L I S S L S	- - - - -	- - - - -	- - - - - S
G181_A_thaliana(537)	P P - - - - -	- - - - -	- - - - -	- - - - -
G1931_A_thaliana(539)	A P - - - - -	- - - - -	- - - - -	- - - - -
G1012_A_thaliana(541)	- - - - -	- - - - -	- - - - -	- - - - -
G1420_A_thaliana(543)	N S F L D L L R Q D H Q F A S S S N S S S F S F D	- - - - -	- - - - -	- - - - -
G2290_A_thaliana(545)	H - - - - -	- - - - -	- - - - -	- - - - - S L R F D
G2575_A_thaliana(547)	N N - - - - -	- - - - -	- - - - -	- - - - -
G195_A_thaliana(549)	E N G L - - - - -	- - - - -	- - - - -	- - - - -
G187_A_thaliana(551)	E - - - - -	- - - - -	- - - - -	- - - - -
G1013_A_thaliana(553)	E D - - - - -	- - - - -	- - - - -	- - - - -

FIG. 22E

Appl. No. 10/714,887
Amdt. dated 11 June 2008
Reply to Office action of 11 December 2008
ANNOTATED SHEET SHOWING CHANGES

	SEQ ID NOS. added										0	140										150				
G3728_Z_mays(148)	-	-	-	-	-	-	-	-	-	-	-	-	D	S	T	A	F	S	S	E	L	D	D	L		
G3804_Z_mays(210)	-	-	-	-	-	-	-	-	-	-	-	-	D	S	T	A	F	S	S	E	L	D	N	L		
G3802_S_bicolor(206)	-	-	-	-	-	-	-	-	-	-	-	-	S	A	T	A	F	S	A	E	L	D	D	L		
G3727_Z_mays(146)	-	-	-	-	-	-	-	-	-	-	-	-	D	S	T	D	F	S	A	E	L	D	D	L		
G3721_O_sativa(134)	-	-	-	-	-	-	-	-	-	-	-	-	D	A	N	L	F	S	G	E	L	D	F	D		
G3730_O_sativa(152)	-	-	-	-	-	-	-	-	-	-	-	-	G	G	C	S	F	G	E	F	L	E	L	G		
G3719_Z_mays(130)	-	-	-	-	-	-	-	-	-	-	-	-	N	G	M	S	L	L	S	Y	G	V	D	G		
G3725_O_sativa(142)	-	-	-	-	-	-	-	-	-	-	-	R	Q	Q	H	L	D	L	L	D	Y	L	S	D	D	
G3722_Z_mays(136)	-	-	-	-	-	-	-	-	-	-	-	-	A	Q	L	D	V	F	D	C	L	S	S	D		
G3733_H_vulgare(158)	-	-	-	-	-	-	-	-	-	-	-	P	A	S	Q	F	D	I	S	E	Y	L	Y	G	D	
G3726_O_sativa(144)	-	-	-	-	-	-	-	-	-	-	-	-	G	S	Q	F	D	I	S	E	F	F	F	D	D	
G3720_Z_mays(132)	-	-	-	-	-	-	-	-	-	-	-	-	E	H	F	D	I	S	E	F	L	F	D	D		
G3729_O_sativa(150)	-	-	-	-	-	-	-	-	-	-	-	-	T	P	E	V	G	F	H	S	K	Q	H	N	P	
G3797_L_sativa(204)	-	-	-	-	-	-	-	-	-	-	-	-	D	K	A	S	T	V	P	E	Y	Q	D	H		
G3795_C_anuum(202)	-	-	-	-	-	-	-	-	-	-	-	-	Q	D	P	T	L	I	P	Q	Y	S	N	Y		
G1275_A_thaliana(30)	-	-	-	-	-	-	-	-	-	-	-	-	Q	T	S	D	V	A	G	A	L	F	S	G		
G1274_A_thaliana(6)	-	-	-	-	-	-	-	-	-	-	-	-	N	G	L	I	E	E	E	I	S	S	P			
G1758_A_thaliana(32)	-	-	-	-	-	-	-	-	-	-	-	-	D	H	S	S	S	S	P	T	L	S	W	S		
G3732_S_tuberosum(156)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	D	D	F	L	S	Q		
G3731_L_esculentum(154)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	D	D	F	L	S	Q		
G3724_G_max(140)	-	-	-	-	-	-	-	-	-	-	-	-	H	Q	-	D	S	R	S	S	Q	S	T	E		
G3723_G_max(138)	-	-	-	-	-	-	-	-	-	-	-	-	H	H	Q	E	S	W	S	Q	S	T	E	T	E	
G3803_G_max(208)	-	-	-	-	-	-	-	-	-	-	-	-	N	Q	E	S	W	S	Q	S	T	E	T	E		
G194_A_thaliana(527)	Q	L	V	T	S	K	V	E	S	L	C	S	D	H	L	L	I	N	P	P	A	T	P	N	S	
G2517_A_thaliana(529)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L	M	H	F	P	T	T	P	N	S
G179_A_thaliana(531)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	G	V	D	N	S	
G2688_A_thaliana(533)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	G	E	E	E	S	
G1956_A_thaliana(535)	S	K	Q	R	D	D	H	D	G	F	L	N	L	D	H	H	R	L	T	G	S	I	S	S	Q	
G181_A_thaliana(537)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	S	T	-	F	S	
G1931_A_thaliana(539)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	S	L	I	F	S	
G1012_A_thaliana(541)																									M	N
G1420_A_thaliana(543)	A	F	P	L	P	N	N	N	N	N	T	S	F	F	T	D	L	P	L	P	Q	A	E	S	S	
G2290_A_thaliana(545)	S	D	L	T	Q	T	T	G	V	K	P	T	T	V	T	S	S	C	S	S	S	A	A	V	S	
G2575_A_thaliana(547)	-	-	-	-	-	P	Y	L	-	-	N	L	T	S	N	S	P	V	V	S	S	S	S	N	E	
G195_A_thaliana(549)	-	Y	N	A	Y	N	Y	N	S	S	Q	K	S	H	E	V	V	G	D	G	C	A	T	I	K	
G187_A_thaliana(551)	-	-	-	-	-	P	N	-	-	-	R	D	V	T	N	D	V	I	N	G	G	A	C	N	E	
G1013_A_thaliana(553)	-	-	-	-	-	-	-	-	-	-	-	F	I	A	N	K	F	V	T	S	T	L	Y	S	G	

FIG. 22F

	SEQ ID NOs. added	160	170
G3728_Z_mays(148)		H H F D Y S P A P I V T A A - - - - -	
G3804_Z_mays(210)		H H F D Y S P A P I V T A A - - - - -	
G3802_S_bicolor(206)		H H F D Y S P A P I F T A V - - - - -	
G3727_Z_mays(146)		H H H L D Y S S P A P T L A - - - - -	
G3721_O_sativa(134)		C S L P A P A Q E Y P E N E - - - - -	
G3730_O_sativa(152)		H S V Y S L P L P P P S Q - - - - -	
G3719_Z_mays(130)		D G D G R R P M S G P P - - - - -	
G3725_O_sativa(142)		Q G V P A P P P A A V P S A S Y V T P A P A M A P	
G3722_Z_mays(136)		E - - G V G V P A A V P G A - - F A P P P L M P	
G3733_H_vulgare(158)		G P L A A P L A P V G A A V - - - - -	
G3726_O_sativa(144)		A P P A A V F N G A P T A A - - - - -	
G3720_Z_mays(132)		A A G A G V A G A P G V F A D - - - - - G A A	
G3729_O_sativa(150)		P P V A A A P L E A G G G R - - - - -	
G3797_L_sativa(204)		T P V Y P S A T I E D G G L - - - - -	
G3795_C_anuum(202)		A A N Q V V N T S S Y Q - - - - -	
G1275_A_thaliana(30)		S S S C F S H P E S P S - - - - -	
G1274_A_thaliana(6)		T S I V S S E T F T G E S G - - - - -	
G1758_A_thaliana(32)		S S E K L V A A E I T S P L - - - - -	
G3732_S_tuberosum(156)		N E I V Q S V S D S S G S Y - - - - -	
G3731_L_esculentum(154)		N E I V Q S V S D T S G S Y - - - - -	
G3724_G_max(140)		S S E K A T F N D A T H G F - - - - -	
G3723_G_max(138)		S S E K A T S S D A S H G F - - - - -	
G3803_G_max(208)		S S E K G N S S D V S H G F - - - - -	
G194_A_thaliana(527)		S S I S S A S S E A L N E E K - - - - -	
G2517_A_thaliana(529)		S - - - - S S E A V N G - - - - -	
G179_A_thaliana(531)		A Q P T T S S E E - - - - -	
G2688_A_thaliana(533)		S K V R S E G C S - - - - -	
G1956_A_thaliana(535)		R P L S N P W A W S C Q A G Y G S S Q K N N H G S	
G181_A_thaliana(537)		G E V E P S S S S S W Y P E S - - - - -	
G1931_A_thaliana(539)		G D V G P S S S S - C T P A G - - - - -	
G1012_A_thaliana(541)		G L V D - - - S S - - - - -	
G1420_A_thaliana(543)		E V V N T T P T S P N S T S V - - - - -	
G2290_A_thaliana(545)		V A V T S T N N N P - - S A T - - - - -	
G2575_A_thaliana(547)		G E P K E N T N D K S D Q M E - - - - -	
G195_A_thaliana(549)		S E V R V S A S P S S S E A D - - - - -	
G187_A_thaliana(551)		T E T R V S P S N S S S S E A - - - - -	
G1013_A_thaliana(553)		P R I Q D I A N A L A L V E - - - - -	

FIG. 22G

	SEQ ID NOs added										190										200									
G3728_Z_mays(148)	-	-	-	-	-	-	G	A	G	A	G	G	G	D	R	N	E	-	K	M	M	W	C	-	-					
G3804_Z_mays(210)	-	-	-	-	-	-	G	A	G	A	G	G	G	D	R	N	E	-	K	M	M	W	C	-	-					
G3802_S_bicolor(206)	-	-	-	-	-	-	G	A	G	A	G	G	-	D	R	N	E	K	M	M	M	W	C	-	-					
G3727_Z_mays(146)	-	-	-	-	-	-	G	A	R	S	D	R	-	-	S	E	K	Q	M	I	R	W	C	-	-					
G3721_O_sativa(134)	-	-	-	-	-	-	N	T	M	M	R	Y	E	S	E	E	K	-	-	-	-	-	-	-	-					
G3730_O_sativa(152)	-	-	-	-	-	-	P	V	V	V	A	G	G	N	N	D	Q	-	-	-	-	-	-	-	-					
G3719_Z_mays(130)	-	-	-	-	-	-	-	Y	G	T	G	G	N	G	G	-	-	-	-	-	-	-	-	-	-					
G3725_O_sativa(142)	A	E	P	V	V	P	D	A	V	A	A	A	G	G	Y	P	R	S	V	A	A	A	A	-	-					
G3722_Z_mays(136)	A	E	R	V	V	P	D	A	A	A	G	Y	S	S	H	T	R	S	-	-	-	-	A	-	-					
G3733_H_vulgare(158)	-	-	-	-	-	-	-	-	-	-	-	-	A	S	S	A	T	A	V	P	A	R	S	-	-					
G3726_O_sativa(144)	-	-	-	-	-	-	L	P	D	G	A	A	A	N	A	T	R	S	A	A	E	A	V	-	-					
G3720_Z_mays(132)	R	P	V	V	L	P	V	P	D	A	A	G	G	G	A	I	I	G	A	A	A	G	G	-	-					
G3729_O_sativa(150)	-	-	-	-	-	-	E	Q	S	R	R	E	A	A	V	N	L	G	K	M	D	R	G	P	-					
G3797_L_sativa(204)	-	-	-	-	-	-	S	I	G	S	S	S	S	N	S	H	L	H	D	G	S	R	S	-	-					
G3795_C_anuum(202)	-	-	-	-	-	-	-	-	-	E	E	P	S	N	N	I	G	S	S	S	S	K	-	-	-					
G1275_A_thaliana(30)	-	-	-	-	-	-	-	T	K	T	Y	V	A	A	T	A	T	A	S	A	D	N	-	-	-					
G1274_A_thaliana(6)	-	-	-	-	-	-	G	S	G	S	A	T	T	L	S	K	K	E	S	T	N	-	-	-	-					
G1758_A_thaliana(32)	-	-	-	-	-	-	Q	T	S	L	A	T	S	P	M	S	F	E	I	G	D	K	D	-	-					
G3732_S_tuberosum(156)	-	-	-	-	-	-	S	N	N	P	T	P	T	S	H	N	I	K	C	M	-	-	-	-	-					
G3731_L_esculentum(154)	-	-	-	-	-	-	S	N	N	P	T	P	T	S	H	N	I	K	C	M	-	-	-	-	-					
G3724_G_max(140)	-	-	-	-	-	-	S	T	G	A	T	S	K	N	N	N	I	N	C	K	-	-	-	-	-					
G3723_G_max(138)	-	-	-	-	-	-	G	D	A	T	S	T	N	T	N	M	H	I	K	C	Q	N	-	-	-					
G3803_G_max(208)	-	-	-	-	-	-	G	D	A	T	F	S	N	T	N	M	H	I	K	C	E	N	-	-	-					
G194_A_thaliana(527)	-	-	-	-	-	-	P	K	T	E	D	N	E	E	E	G	G	E	D	Q	Q	E	K	S	-	-				
G2517_A_thaliana(529)	-	-	-	-	-	-	-	D	D	E	E	E	E	D	G	E	E	Q	Q	H	K	T	-	-	-					
G179_A_thaliana(531)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
G2688_A_thaliana(533)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
G1956_A_thaliana(535)	E	I	D	V	D	D	N	D	D	E	V	G	D	G	G	G	I	N	D	D	D	N	G	R	H					
G181_A_thaliana(537)	-	-	-	-	-	-	F	H	V	H	A	P	P	L	P	P	E	-	-	-	-	-	-	-	-					
G1931_A_thaliana(539)	-	-	-	-	-	-	Y	H	L	S	A	Q	L	E	N	F	R	G	G	G	G	E	M	G	G	L				
G1012_A_thaliana(541)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
G1420_A_thaliana(543)	-	-	-	-	-	-	S	S	S	S	N	E	A	A	N	D	N	N	S	G	K	E	V	T	V	K				
G2290_A_thaliana(545)	-	-	-	-	-	-	S	S	S	S	E	D	P	A	E	N	S	T	A	S	A	E	K	T	P	P				
G2575_A_thaliana(547)	-	-	-	-	-	-	D	N	E	G	D	L	H	G	V	G	E	S	S	K	Q	L	T	K	-	-				
G195_A_thaliana(549)	-	-	-	-	-	-	H	H	P	G	E	D	S	G	K	I	R	K	K	R	E	V	R	D	G	G				
G187_A_thaliana(551)	-	-	-	-	-	-	D	H	P	G	E	D	S	G	K	S	R	R	K	R	E	L	V	G	-	-				
G1013_A_thaliana(553)	-	-	-	-	-	-	-	P	L	T	H	P	V	R	E	I	S	K	S	T	V	P	-	-	-	-				

FIG. 22H

	SEQ ID										210										220									
	NOs added																													
G3728_Z_mays (148)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	E	G	G	G	D	E	R	R						
G3804_Z_mays (210)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Q	G	G	G	D	E	R	R						
G3802_S_bicolor (206)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	E	G	G	G	D	E	K	R						
G3727_Z_mays (146)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	E	G	G	G	G	E	K	R						
G3721_O_sativa (134)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	M	R						
G3730_O_sativa (152)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	G	V	S	S	S	S	S						
G3719_Z_mays (130)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	G	R	P	P	S	S	-						
G3725_O_sativa (142)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A	A	V	A	G	E	G	R						
G3722_Z_mays (136)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A	A	V	A	G	E	G	S						
G3733_H_vulgare (158)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A	A	E	S	A	A	A	V						
G3726_O_sativa (144)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	A	P	A	P	A	A	V						
G3720_Z_mays (132)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A	A	A	A	S	E	V	P						
G3729_O_sativa (150)	-	-	-	-	-	-	-	-	-	-	-	-	-	A	P	V	S	G	G	A	A	T	G	G	V					
G3797_L_sativa (204)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	R	A	T	G	F	G	Q	A						
G3795_C_anuum (202)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	R						
G1275_A_thaliana (30)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Q	N	K	K	E	-	-	-						
G1274_A_thaliana (6)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	R	G	S	K	E	S	D	Q						
G1758_A_thaliana (32)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	E	I	K	K	R	K	R						
G3732_S_tuberosum (156)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	K	G	V	K	-	-	-	-						
G3731_L_esculentum (154)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	K	G	I	K	-	-	-	-						
G3724_G_max (140)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	N	G	I	N	E	-	-	N						
G3723_G_max (138)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	S	G	I	K	G	-	-	K						
G3803_G_max (208)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	N	G	I	K	R	-	-	K						
G194_A_thaliana (527)	-	-	-	-	-	-	-	-	-	-	-	-	-	H	T	K	K	Q	L	K	A	K	K	N	N	Q				
G2517_A_thaliana (529)	-	-	-	-	-	-	-	-	-	-	-	-	-	K	K	R	F	K	F	T	K	M	S	R	K	Q				
G179_A_thaliana (531)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	K	P	R	S	K	K	K	K	E					
G2688_A_thaliana (533)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	K	S	V	E	S	S	K	K	G					
G1956_A_thaliana (535)	H	H	H	D	T	P	S	R	H	D	K	H	N	T	A	S	L	G	V	V	S	S	L	K	M					
G181_A_thaliana (537)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	N	D	Q	I	G	E	K	G	K	E	L					
G1931_A_thaliana (539)	V	S	N	-	-	-	-	-	-	-	-	-	-	-	N	S	N	N	S	D	H	N	K	N	C					
G1012_A_thaliana (541)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	R	D	K	K	M					
G1420_A_thaliana (543)	D	Q	E	E	G	D	Q	Q	Q	E	Q	K	G	T	K	P	Q	L	K	A	K	K	K	N	Q					
G2290_A_thaliana (545)	P	E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	T	P	V	K	E	K	K	K	A	Q				
G2575_A_thaliana (547)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Q	G	K	K	K	G	E						
G195_A_thaliana (549)	E	D	D	Q	R	-	-	-	-	-	-	-	-	S	Q	K	V	V	K	T	K	K	K	E	E					
G187_A_thaliana (551)	E	E	D	Q	I	-	-	-	-	-	-	-	-	S	K	K	V	G	K	T	K	K	T	E	V					
G1013_A_thaliana (553)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L	L	E	R	S	T	L					

FIG. 22I

FIG. 22J

	SEQ ID NOs. added	260	270
G3728_Z_mays(148)		E I L D D G F K W R K Y G K K A	V K N S P N P R N
G3804_Z_mays(210)		E I L D D G F K W R K Y G K K A	V K N S P N P R N
G3802_S_bicolor		E I L D D G F K W R K Y G K K A	V K N S P N P R N
G3727_Z_mays(146)		E I L D D G F K W R K Y G K K A	V K S S P N P R N
G3721_O_sativa(134)		E I L D D G F K W R K Y G K K A	V K N S P N P R N
G3730_O_sativa(152)		E V L D D G F K W R K Y G K K A	V K S S P N P R N
G3719_Z_mays(130)		D V L D D G F K W R K Y G K K A	V K S S P N P R N
G3725_O_sativa(142)		E I L D D G Y K W R K Y G K K S	V K N S P N P R N
G3722_Z_mays(136)		E V L D D G Y K W R K Y G K K S	V K N S P N P R N
G3733_H_vulgare(158)		E I L D D G Y K W R K Y G K K S	V K N S P N P R N
G3726_O_sativa(144)		E I L D D G Y K W R K Y G K K S	V K N S P N P R N
G3720_Z_mays(132)		E I L D D G Y K W R K Y G K K S	V K N S P N P R N
G3729_O_sativa(150)		D V L D D G Y R W R K Y G K K M	V K N S P N P R N
G3797_L_sativa(204)		E I L D D G F K W R K Y G K K M	V K N S P N P R N
G3795_C_anuum(202)		E I L D D G Y K W R K Y G K K M	V K N S P N P R N
G1275_A_thaliana(30)		E V L D D G F K W R K Y G K K M	V K N S P H P R N
G1274_A_thaliana(6)		D V M D D G F K W R K Y G K K S	V K N N I N K R N
G1758_A_thaliana(32)		V A L D D G Y K W R K Y G K K P	I T G S P F P R H
G3732_S_tuberosum(156)		E V L D D G F K W R K Y G K K M	V K N S S N P R N
G3731_L_esculentum(154)		E V L D D G F K W R K Y G K K M	V K N N P N P R N
G3724_G_max(140)		E I M D D G Y K W R K Y G K K S	V K S S P N L R N
G3723_G_max(138)		E V M D D G Y K W R K Y G K K T	V K S S P N P R N
G3803_G_max(208)		E V M D D G Y K W R K Y G K K T	V K N N P N P R N
G194_A_thaliana(527)		D H L E D G Y R W R K Y G Q K A	V K N S P F P R S
G2517_A_thaliana(529)		L H L D D G Y K W R K Y G Q K P	V K D S P F P R N
G179_A_thaliana(531)		D I L D D G Y R W R K Y G Q K A	V K N - P F P R S
G2688_A_thaliana(533)		D I L D D G Y R W R K Y G Q K A	V K N N K F P R S
G1956_A_thaliana(535)		D V L D D G Y R W R K Y G Q K V	V K N T Q H P R S
G181_A_thaliana(537)		D V L D D G Y R W R K Y G Q K S	V K H N A H P R S
G1931_A_thaliana(539)		D V L D D G Y R W R K Y G Q K S	V K N N A H P R S
G1012_A_thaliana(541)		D I L D D G Y R W R K Y G Q K S	V K N S L Y P R S
G1420_A_thaliana(543)		D N L D D G Y R W R K Y G Q K A	V K N S P Y P R S
G2290_A_thaliana(545)		D N L E D G Y R W R K Y G Q K A	V K N S P F P R S
G2575_A_thaliana(547)		D H L E D G Y R W R K Y G Q K A	V K N S P Y P R S
G195_A_thaliana(549)		D H L E D G Y R W R K Y G Q K A	V K N S P Y P R S
G187_A_thaliana(551)		D H L E D G Y R W R K Y G Q K A	V K N S P Y P R S
G1013_A_thaliana(553)		G M C D D G Y K W R K Y G Q K S	I K N S P N P R S
(663) (664)		E . L D D G Y K W R K Y G K K	V K N S P N P R N

FIG. 22K

	SEQ ID Nucleotide added																								
	280										290	300													
G3728_Z_mays(148)	Y	Y	R	C	S	S	E	G	C	G	V	K	K	R	V	E	R	D	R	D	D	P	R	Y	V
G3804_Z_mays(210)	Y	Y	R	C	S	S	E	G	C	G	V	K	K	R	V	E	R	D	R	D	D	P	R	Y	V
G3802_S_bicolor	Y	Y	R	C	S	S	E	G	C	G	V	K	K	R	V	E	R	D	R	D	D	P	R	Y	V
G3727_Z_mays(146)	Y	Y	R	C	S	S	E	G	C	G	V	K	K	R	V	E	R	D	R	D	D	P	R	Y	V
G3721_O_sativa(134)	Y	Y	R	C	S	T	E	G	C	N	V	K	K	R	V	E	R	D	R	E	D	H	R	Y	V
G3730_O_sativa(152)	Y	Y	R	C	S	A	A	G	C	G	V	K	K	R	V	E	R	D	G	D	D	P	R	Y	V
G3719_Z_mays(130)	Y	Y	R	C	S	T	E	G	S	G	V	K	K	R	V	E	R	D	S	D	D	P	R	Y	V
G3725_O_sativa(142)	Y	Y	R	C	S	T	E	G	C	N	V	K	K	R	V	E	R	D	K	N	D	P	R	Y	V
G3722_Z_mays(136)	Y	Y	R	C	S	T	E	G	C	N	V	K	K	R	V	E	R	D	R	D	D	P	R	Y	V
G3733_H_vulgare(158)	Y	Y	R	C	S	T	E	G	C	S	V	K	K	R	V	E	R	D	R	D	D	P	A	Y	V
G3726_O_sativa(144)	Y	Y	R	C	S	T	E	G	C	N	V	K	K	R	V	E	R	D	K	D	D	P	S	Y	V
G3720_Z_mays(132)	Y	Y	R	C	S	T	E	G	C	N	V	K	K	R	V	E	R	D	K	D	D	P	S	Y	V
G3729_O_sativa(150)	Y	Y	R	C	S	S	E	G	C	R	V	K	K	R	V	E	R	A	R	D	D	A	R	F	V
G3797_L_sativa(204)	Y	Y	R	C	S	A	A	G	C	S	V	K	K	R	V	E	R	D	V	E	D	A	R	Y	V
G3795_C_anuum(202)	Y	Y	R	C	S	V	E	G	C	P	V	K	K	R	V	E	R	D	K	E	D	S	R	Y	V
G1275_A_thaliana(30)	Y	Y	K	C	S	V	D	G	C	P	V	K	K	R	V	E	R	D	R	D	D	P	S	F	V
G1274_A_thaliana(6)	Y	Y	K	C	S	S	E	G	C	S	V	K	K	R	V	E	R	D	G	D	D	A	A	Y	V
G1758_A_thaliana(32)	Y	H	K	C	S	S	P	D	C	N	V	K	K	K	I	E	R	D	T	N	N	P	D	Y	I
G3732_S_tuberosum(156)	Y	Y	K	C	S	S	G	G	C	N	V	K	K	R	V	E	R	D	N	E	D	S	S	Y	V
G3731_L_esculentum(154)	Y	Y	K	C	S	S	G	G	C	N	V	K	K	R	V	E	R	D	N	K	D	S	S	Y	V
G3724_G_max(140)	Y	Y	K	C	S	S	G	G	C	S	V	K	K	R	V	E	R	D	R	D	D	Y	S	Y	V
G3723_G_max(138)	Y	Y	K	C	S	G	E	G	C	D	V	K	K	R	V	E	R	D	R	D	D	S	N	Y	V
G3803_G_max(208)	Y	Y	K	C	S	G	E	G	C	N	V	K	K	R	V	E	R	D	R	D	D	S	N	Y	V
G194_A_thaliana(527)	Y	Y	R	C	T	T	A	S	C	N	V	K	K	R	V	E	R	S	F	R	D	P	S	T	V
G2517_A_thaliana(529)	Y	Y	R	C	T	T	T	W	C	D	V	K	K	R	V	E	R	S	F	S	D	P	S	S	V
G179_A_thaliana(531)	Y	Y	K	C	T	E	E	G	C	R	V	K	K	Q	V	Q	R	Q	W	G	D	E	G	V	V
G2688_A_thaliana(533)	Y	Y	R	C	T	Y	G	G	C	N	V	K	K	Q	V	Q	R	L	T	V	D	Q	E	V	V
G1956_A_thaliana(535)	Y	Y	R	C	T	Q	D	K	C	R	V	K	K	R	V	E	R	L	A	D	D	P	R	M	V
G181_A_thaliana(537)	Y	Y	R	C	T	Y	H	T	C	N	V	K	K	Q	V	Q	R	L	A	K	D	P	N	V	V
G1931_A_thaliana(539)	Y	Y	R	C	T	Y	H	T	C	N	V	K	K	Q	V	Q	R	L	A	K	D	P	N	V	V
G1012_A_thaliana(541)	Y	Y	R	C	T	Q	H	M	C	N	V	K	K	Q	V	Q	R	L	S	K	E	T	S	I	V
G1420_A_thaliana(543)	Y	Y	R	C	T	T	V	G	C	G	V	K	K	R	V	E	R	S	S	D	D	P	S	I	V
G2290_A_thaliana(545)	Y	Y	R	C	T	N	S	R	C	T	V	K	K	R	V	E	R	S	S	D	D	P	S	I	V
G2575_A_thaliana(547)	Y	Y	R	C	T	T	Q	K	C	N	V	K	K	R	V	E	R	S	F	Q	D	P	S	I	V
G195_A_thaliana(549)	Y	Y	R	C	T	T	Q	K	C	N	V	K	K	R	V	E	R	S	Y	Q	D	P	T	V	V
G187_A_thaliana(551)	Y	Y	R	C	T	T	Q	K	C	N	V	K	K	R	V	E	R	S	F	Q	D	P	T	V	V
G1013_A_thaliana(553)	Y	Y	K	C	T	N	P	I	C	N	A	K	K	Q	V	E	R	S	I	D	E	S	N	T	Y
(664) (665) (666)	Y	Y	R	C	S	.	.	G	C	.	V	K	K	R	V	E	R	D	.	D	D	P	.	Y	V

FIG. 22L

	SEQ ID NOs added	310	320
G3728_Z_mays(148)		I T T Y D G V H N H A S P	G A A A I I V P Y G S G
G3804_Z_mays(210)		I T T Y D G V H N H A S P	A A A A I I V P Y G N G
G3802_S_bicolor		I T T Y D G V H N H A S P	G A A A I I Q Y G G - G
G3727_Z_mays(146)		I T T Y D G V H N H A S P	A A A A I I Q Y G G - -
G3721_O_sativa(134)		I T T Y D G V H N H A S P	A A A A A A L Q Y A A A
G3730_O_sativa(152)		V T T Y D G V H N H A T P	G C V G G G G H L P Y P
G3719_Z_mays(130)		V T T Y D G V H N H A A P	G - P G A A S Y L C Q P
G3725_O_sativa(142)		V T M Y E G I H N H V C P	G T V Y Y A A Q D A - -
G3722_Z_mays(136)		V T M Y E G V H N H V S P	G T V Y Y A T H D A - -
G3733_H_vulgare(158)		V T T Y E G T H S H A S P	S T V Y Y A S Q D A - -
G3726_O_sativa(144)		V T T Y E G T H N H V S P	S T V Y Y A S Q D A - -
G3720_Z_mays(132)		V T T Y E G M H N H V S P	S T V Y Y A S Q D A - -
G3729_O_sativa(150)		V T T Y D G V H N H P A P	L H L R P Q L P P P G G
G3797_L_sativa(204)		I T T Y E G I H N H Q R P	S N Y
G3795_C_anuum(202)		I T T Y E G V H N H Q G L	S P F
G1275_A_thaliana(30)		I T T Y E G S H N H S S	S M N
G1274_A_thaliana(6)		I T T Y E G V H N H E S L	S N V Y Y N E M V L S Y
G1758_A_thaliana(32)		L T T Y E G R H N H P S P	S V V Y C D S D D F D L
G3732_S_tuberosum(156)		I T T Y E G I H N H E S P	Y V F H Y T Q F P P N N
G3731_L_esculentum(154)		I T T Y E G I H N H E S P	H V L H Y T Q F P P N N
G3724_G_max(140)		I T T Y E G V H N H E S P	F T T Y Y S P I S F V H
G3723_G_max(138)		L T T Y D G V H N H Q T P	S T A Y Y S Q M P L L H
G3803_G_max(208)		L T T Y D G V H N H E S P	S T A Y Y S Q I P L V H
G194_A_thaliana(527)		V T T Y E G Q H T H I S P	L T S R P I S T G G F F
G2517_A_thaliana(529)		I T T Y E G Q H T H P R P	L L I M P - - K E G S S
G179_A_thaliana(531)		V T T Y Q G V H T H A V D	K P S D N F H H I L T Q
G2688_A_thaliana(533)		V T T Y E G V H S H P I E	K S T E N F E H I L T Q
G1956_A_thaliana(535)		I T T Y E G R H L H S P	S N H L D D D S L S T - -
G181_A_thaliana(537)		V T T Y E G V H N H P C E	K L M E T L N P L L R Q
G1931_A_thaliana(539)		V T T Y E G V H N H P C E	K L M E T L S P L L R Q
G1012_A_thaliana(541)		E T T Y E G I H N H P C E	E L M Q T L T P L L H Q
G1420_A_thaliana(543)		M T T Y E G Q H T H P F P	M T P R G H I G M L T S
G2290_A_thaliana(545)		I T T Y E G Q H C H Q T I	G F P R G G I L T A H D
G2575_A_thaliana(547)		I T T Y E G K H N H P I P	S T L R G T V A A E H L
G195_A_thaliana(549)		I T T Y E S Q H N H P I P	T N R R T A M F S G T T
G187_A_thaliana(551)		I T T Y E G Q H N H P I P	T N L R G S S A A A A M
G1013_A_thaliana(553)		I I T Y E G F H F H Y T	Y P F F L P D K T R Q W P
(666)		I T T Y E G . H N H . P .	.

FIG. 22M

Appl. No. 10/714,887
Amdt. dated 11 June 2008
Reply to Office action of 11 December 2008
ANNOTATED SHEET SHOWING CHANGES

	SEQ ID		340																																		350																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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G3728_Z_mays (148)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

FIG. 22N

	SEQ ID Nos. added	360	370
G3728_Z_mays (148)	-	-	-
G3804_Z_mays (210)	-	-	-
G3802_S_bicolor (206)	-	-	-
G3727_Z_mays (146)	-	-	-
G3721_O_sativa (134)	-	-	-
G3730_O_sativa (152)	-	-	-
G3719_Z_mays (130)	A A A P S W	-	-
G3725_O_sativa (142)	-	-	-
G3722_Z_mays (136)	-	-	-
G3733_H_vulgare (158)	-	-	-
G3726_O_sativa (144)	-	-	-
G3720_Z_mays (132)	-	-	-
G3729_O_sativa (150)	-	-	-
G3797_L_sativa (204)			
G3795_C_anuum (202)			
G1275_A_thaliana (30)			
G1274_A_thaliana (6)			
G1758_A_thaliana (32)			
G3732_S_tuberosum (156)			
G3731_L_esculentum (154)			
G3724_G_max (140)			
G3723_G_max (138)			
G3803_G_max (208)			
G194_A_thaliana (527)	G S T L I S P Q F Q Q L V Q Y H H Q Q Q Q Q E L M		
G2517_A_thaliana (529)	- - - - - - - - - P Q L L D Y N N Q Q Q Q A P S S		
G179_A_thaliana (531)			
G2688_A_thaliana (533)			
G1956_A_thaliana (535)			
G181_A_thaliana (537)			
G1931_A_thaliana (539)			
G1012_A_thaliana (541)			
G1420_A_thaliana (543)	P R Y L L T - - - - Q H H Q P Y N M Y N N N S L S		
G2290_A_thaliana (545)	P Y Y Y Q E - - - - L L H Q L H R - - D N N - - -		
G2575_A_thaliana (547)	Q D F L M M - - - - K H S P A N Y Q S V G S - - -		
G195_A_thaliana (549)	P R S F S - - - - - - - - - N D D L F R - - -		
G187_A_thaliana (551)	A Y T N G G - - - - S V A A A L D Y G Y G Q - - -		
G1013_A_thaliana (553)	E -		

FIG. 220

	SEQ ID																									
	Nucleotide added																									
G3728_Z_mays(148)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
G3804_Z_mays(210)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
G3802_S_bicolor(206)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
G3727_Z_mays(146)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
G3721_O_sativa(134)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
G3730_O_sativa(152)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
G3719_Z_mays(130)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
G3725_O_sativa(142)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
G3722_Z_mays(136)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
G3733_H_vulgare(158)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
G3726_O_sativa(144)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
G3720_Z_mays(132)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
G3729_O_sativa(150)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
G3797_L_sativa(204)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
G3795_C_anuum(202)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
G1275_A_thaliana(30)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
G1274_A_thaliana(6)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
G1758_A_thaliana(32)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
G3732_S_tuberosum(156)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
G3731_L_esculentum(154)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
G3724_G_max(140)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
G3723_G_max(138)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
G3803_G_max(208)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
G194_A_thaliana(527)	S	C	F	G	G	V	N	E	Y	L	N	S	H	A	N	E	Y	G	D	D	N	R	V	K	K	
G2517_A_thaliana(529)	F	G	T	E	Y	I	N	R	Q	E	K	G	I	N	H	D	D	D	D	D	H	V	V	K	K	
G179_A_thaliana(531)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
G2688_A_thaliana(533)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
G1956_A_thaliana(535)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
G181_A_thaliana(537)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
G1931_A_thaliana(539)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
G1012_A_thaliana(541)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
G1420_A_thaliana(543)	M	I	N	R	R	S	S	D	G	T	F	V	N	P	G	P	S	S	S	F	P	G	F	G	Y	
G2290_A_thaliana(545)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A	P	S	P	R	L	P	R	P	T	T
G2575_A_thaliana(547)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L	S	Y	E	H	G	H	G	T	S
G195_A_thaliana(549)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	V	P	Y	A	S	V	N	V	N	P
G187_A_thaliana(551)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	S	G	Y	G	S	V	N	S	N	P
G1013_A_thaliana(553)	-	-	A	Q	L	G	E	L	T	N	Q	N	H	P	V	N	K	A	Q	E	N	T	P	A	N	-

FIG. 22P

Appl. No. 10/714,887
Amdt. dated 11 June 2008
Reply to Office action of 11 December 2008
ANNOTATED SHEET SHOWING CHANGES

	SEQ ID NOs added	410	420
G3728_Z_mays (148)	- - - - -	- - - A T S Y S G S L A F	
G3804_Z_mays (210)	- - - - -	- - - A T S Y S G S L V F	
G3802_S_bicolor (206)	- - - - -	- - - A A S Y S G S F V F	
G3727_Z_mays (146)	- - - - -	- - - A A S Y S G S F V L	
G3721_O_sativa (134)	- - - - -	- - - A A Y F G R R L R C S S E G	
G3730_O_sativa (152)	- - - - -	- - - A H A Q A W G A P L H A A A A -	
G3719_Z_mays (130)	- - - - -	- S A A C D A W W E A Q L H A A A A V	
G3725_O_sativa (142)	- - - - -	- - - - - - - - L N	
G3722_Z_mays (136)	- - - - -	- - - - - - - - H	
G3733_H_vulgare (158)	- - - - -	- - - - - - - - G S L N	
G3726_O_sativa (144)	- - - - -	- - - - - - - - G S L N	
G3720_Z_mays (132)	- - - - -	- - - - - - - - G S L N	
G3729_O_sativa (150)	- - - - -	- G L E E A E V I A L F R G T T A T	
G3797_L_sativa (204)			
G3795_C_anuum (202)			
G1275_A_thaliana (30)			
G1274_A_thaliana (6)			
G1758_A_thaliana (32)			
G3732_S_tuberosum (156)			
G3731_L_esculentum (154)			
G3724_G_max (140)			
G3723_G_max (138)			
G3803_G_max (208)			
G194_A_thaliana (527)	S R - - - - -	- - - V L V K D N G L L Q D V V P S	
G2517_A_thaliana (529)	S R T R D L L D G A G L V K D H G L L Q D V V P S		
G179_A_thaliana (531)			
G2688_A_thaliana (533)			
G1956_A_thaliana (535)			
G181_A_thaliana (537)			
G1931_A_thaliana (539)			
G1012_A_thaliana (541)			
G1420_A_thaliana (543)	D M S Q A S T S T S S S I R D H G L L Q D I L P S		
G2290_A_thaliana (545)	E D T P A V S T P S - - - - -	E E G L L G D I V P Q	
G2575_A_thaliana (547)	S Y N F N N N Q P V - - - - -	V D Y G L L Q D I V P S	
G195_A_thaliana (549)	S Y H Q Q Q H G F H Q Q E S E F E L L K E M F P S		
G187_A_thaliana (551)	S S H Q V Y H Q G G - - - - -	E Y E L L R E I F P S	
G1013_A_thaliana (553)	L E E G L F F P V D Q C R P Q Q G L L E D V V A P		

FIG. 22Q


	SEQ ID Nos. added	440	450
G3728_Z_mays (148)			
G3804_Z_mays (210)			
G3802_S_bicolor (206)			
G3727_Z_mays (146)			
G3721_O_sativa (134)			
G3730_O_sativa (152)	A H S S E S S F		
G3719_Z_mays (130)	A H S S E S S Y		
G3725_O_sativa (142)			
G3722_Z_mays (136)			
G3733_H_vulgare (158)			
G3726_O_sativa (144)			
G3720_Z_mays (132)			
G3729_O_sativa (150)	S L L L P		
G3797_L_sativa (204)			
G3795_C_anuum (202)			
G1275_A_thaliana (30)			
G1274_A_thaliana (6)			
G1758_A_thaliana (32)			
G3732_S_tuberosum (156)			
G3731_L_esculentum (154)			
G3724_G_max (140)			
G3723_G_max (138)			
G3803_G_max (208)			
G194_A_thaliana (527)	H M L K E E		
G2517_A_thaliana (529)	H I I K E E Y		
G179_A_thaliana (531)			
G2688_A_thaliana (533)			
G1956_A_thaliana (535)			
G181_A_thaliana (537)			
G1931_A_thaliana (539)			
G1012_A_thaliana (541)			
G1420_A_thaliana (543)	Q I R S D T I N T Q T N E E N K K		
G2290_A_thaliana (545)	T M R N P		
G2575_A_thaliana (547)	M F S K N E S		
G195_A_thaliana (549)	V F F K Q E P		
G187_A_thaliana (551)	I F F K Q E P		
G1013_A_thaliana (553)	A M K N I P T R D S V L T A S		

FIG. 22R

SEQ ID
Nos. added

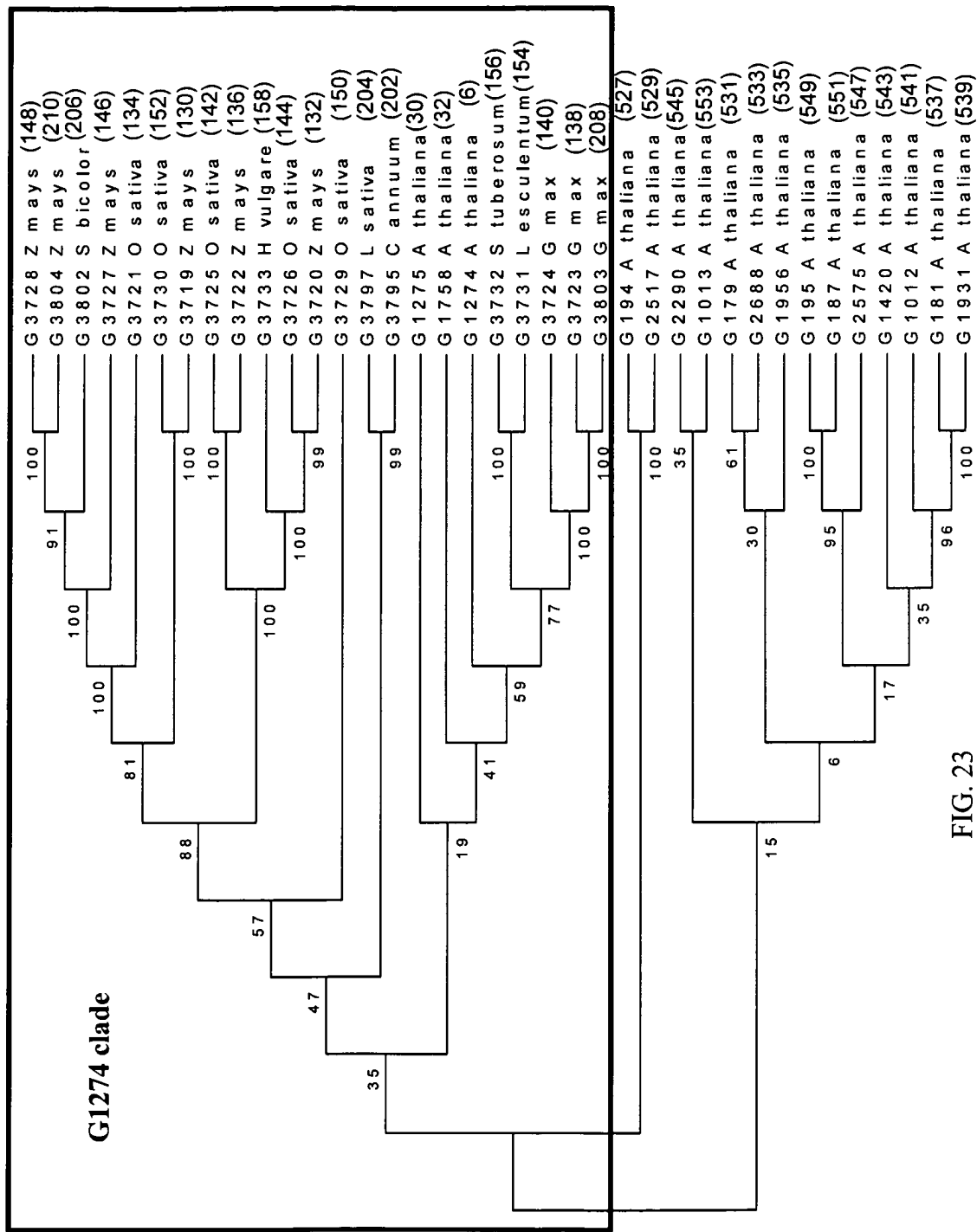


FIG. 23

FIG. 24

FIG. 24

SEQ ID Nos. added		10	20	30
G3809_O_sativa (593)		M A V E G F E E A I K C L E N L K L E S G E A S L E Q R V R		
pG3807_O_sativa(594)				
pG521 (595)				
pG3041 (596)				
pG3832 (partial) (592)				
pG515 (20)				
pG2053 (10)				
pG516 (22)				
pG517 (24)				
pG513 (597)				
pG960 (598)				
pG3834_B_rapa (599)				
pG1455 (600)				
pG3805_O_sativa (601)				
pG958 (602)				
pG1924 (603)				
pG518 (604)				
pG3808_O_sativa (605)				
pG3833_G_max (606)				
pG523 (607)				
pG514 (608)				
pG3806_O_sativa (609)				
pG526 (610)				
pG1454 (611)				

M R L A R Q Q Q V V V A A

M

FIG. 27A

40

50

60

FIG. 27B

FIG. 27B

SEQ ID	70	80	90
NOs added			
G3809_O_sativa (593)	P T D D E E L L L L H Y L G K R A - - - A A P C P A V I		
pG3807_O_sativa(594)	P T D D V E L L T V Y Y L K R K L L - - - G K H L R C N A V		
pG521 (595)	P T D D V E L L V R Y Y L K R K V M - - - G K K F Q D A I		
pG3041 (596)	P T D D E E L V R Y Y L K R K I C - - - N K P F K F D A I		
pG3832 (partial) (592)	P T D D V E L V H Y L R P K N N G G S T T S S Q V D Q F I I		
pG515 (20)	P T D D E E I V V D Y L W P K N S - - - D R D T S H V D R V I		
pG2053 (10)	P T D D K E I V V D Y L R P K N S - - - D R D T S H V D R V I		
pG516 (22)	P T D D G E I V V D I Y L R P K N L - - - E S N T S H V D E V I		
pG517 (24)	P N D E E I V D H Y L R P K N L - - - D S D T S H V D E V I		
pG513 (597)	P T D D E E L V R Y Y L R L K I N - - - G H D N D V R V I		
pG960 (598)	P T D D E E L V N H Y L R L K I N - - - G R H S D V R V I		
pG3834_B_rapa (599)	P T D D E E L I N H Y L R L K I N - - - G R D L E V R V I		
pG1455 (600)	P T D D E E L I N H Y L R L K I N - - - G R D L E V R V I		
pG3805_O_sativa (601)	P T D D E E L I I Y Y L K R K I N - - - G R Q I E L E I I I		
pG958 (602)	P T D D E E L V I Y Y L K R K I N - - - G R T I E L E I I I		
pG1924 (603)	P T D D E E L V I Y Y L K R K I N - - - G Q E I E L E I I I		
pG518 (604)	P T D D E E L I T Y Y L K R K I N - - - G Q E I E L E I I I		
pG3808_O_sativa (605)	P T D D E E L I T H Y L R K A A D - - - P A G F A R A I V		
pG3833_G_max (606)	P T D D E E L I S H Y L R K V T - - - D T N F S A R A I		
pG523 (607)	P T D D E E L I T H Y L H K K V L - - - D L G F S A K A I		
pG514 (608)	P T D D E E L I T H Y L H N K V L - - - D T S F S A K A I		
pG3806_O_sativa (609)	P T D D E E V T T H Y L T R K A Q - - - D R S F S C V I		
pG526 (610)	P T D D E E I T T C Y L K E K V L - - - N S R F T A V A I		
pG1454 (611)	P T D D E E L V T H Y L K R K A A - - - S A P L P V A I		
(695) (696)	P T D D E E L V H Y L . . K .		I .

FIG. 27C

ANNOTATED SHEET SHOWING CHANGES																																	
SEQ ID NOs: added			100										110										120										
G3809_O_sativa (593)	A	E	V	D	I	Y	K	Y	N	P	W	E	L	P	A	M	A	-	V	F	G	E	S	D	G	R	L	E	W	Y	F	F	
pG3807_O_sativa (594)	S	E	L	D	L	Y	K	F	A	P	W	D	L	P	E	K	S	-	S	L	Q	S	K	D	G	R	L	E	W	Y	F	F	
pG521 (595)	A	E	V	D	I	Y	K	F	E	P	W	D	L	P	E	K	S	-	S	L	Q	S	K	D	G	R	L	E	W	Y	F	F	
pG3041 (596)	S	V	T	D	V	Y	K	S	E	P	W	D	L	P	E	K	S	-	S	L	Q	S	K	D	G	R	L	E	W	Y	F	F	
pG3832 (partial) (592)	N	T	V	D	I	C	N	L	D	P	W	E	L	P	E	K	S	-	S	L	Q	S	K	D	G	R	L	E	W	Y	F	F	
pG515 (20)	N	T	V	P	V	C	R	L	D	P	W	E	L	P	E	K	S	-	S	L	Q	S	K	D	G	R	L	E	W	Y	F	F	
pG2053 (10)	S	T	V	T	I	R	S	F	D	P	W	E	L	P	E	K	S	-	S	L	Q	S	K	D	G	R	L	E	W	Y	F	F	
pG516 (22)	S	T	V	D	I	C	S	F	D	P	W	D	L	P	E	K	S	-	S	L	Q	S	K	D	G	R	L	E	W	Y	F	F	
pG517 (24)	S	T	V	D	I	C	S	F	E	P	W	D	L	P	E	K	S	-	S	L	Q	S	K	D	G	R	L	E	W	Y	F	F	
pG513 (597)	R	E	I	D	I	C	K	W	E	P	W	D	L	P	E	K	S	-	S	L	Q	S	K	D	G	R	L	E	W	Y	F	F	
pG960 (598)	P	D	I	D	V	C	K	W	E	P	W	D	L	P	E	K	S	-	S	L	Q	S	K	D	G	R	L	E	W	Y	F	F	
pG3834_B_rapa (599)	P	E	I	D	V	C	K	W	E	P	W	D	L	P	E	K	S	-	S	L	Q	S	K	D	G	R	L	E	W	Y	F	F	
pG1455 (600)	P	E	I	D	V	C	K	W	E	P	W	D	L	P	E	K	S	-	S	L	Q	S	K	D	G	R	L	E	W	Y	F	F	
pG3805_O_sativa (601)	P	E	V	D	L	Y	K	C	E	P	W	D	L	P	E	K	S	-	S	L	Q	S	K	D	G	R	L	E	W	Y	F	F	
pG958 (602)	P	E	I	D	L	Y	K	C	E	P	W	D	L	P	E	K	S	-	S	L	Q	S	K	D	G	R	L	E	W	Y	F	F	
pG1924 (603)	P	E	V	D	L	Y	K	C	E	P	W	D	L	P	E	K	S	-	S	L	Q	S	K	D	G	R	L	E	W	Y	F	F	
pG518 (604)	P	E	V	D	L	Y	K	C	E	P	W	D	L	P	E	K	S	-	S	L	Q	S	K	D	G	R	L	E	W	Y	F	F	
pG3808_O_sativa (605)	G	E	A	D	L	N	K	C	E	P	W	D	L	P	E	K	S	-	S	L	Q	S	K	D	G	R	L	E	W	Y	F	F	
pG3833_G_max (606)	G	E	V	D	L	N	K	C	E	P	W	D	L	P	E	K	S	-	S	L	Q	S	K	D	G	R	L	E	W	Y	F	F	
pG523 (607)	G	E	V	D	L	N	K	C	E	P	W	E	L	P	E	K	S	-	S	L	Q	S	K	D	G	R	L	E	W	Y	F	F	
pG514 (608)	G	E	V	D	L	N	K	C	E	P	W	E	L	P	E	K	S	-	S	L	Q	S	K	D	G	R	L	E	W	Y	F	F	
pG3806_O_sativa (609)	A	D	V	N	L	N	C	E	P	W	D	L	P	E	K	S	-	S	L	Q	S	K	D	G	R	L	E	W	Y	F	F	F	F
pG526 (610)	G	E	A	D	L	N	K	C	E	P	W	D	L	P	E	K	S	-	S	L	Q	S	K	D	G	R	L	E	W	Y	F	F	F
pG1454 (611)	A	E	V	D	L	Y	K	F	D	P	W	E	L	P	E	K	S	-	S	L	Q	S	K	D	G	R	L	E	W	Y	F	F	F
(696) (697) (698)	E	V	D	L	K	E	P	W	D	L	P	E	K	S	D	K	S	-	S	L	Q	S	K	D	G	R	L	E	W	Y	F	F	F

FIG. 27D

FIG. 27E

FIG. 27E

ANNOTATED SHEET SHOWING CHANGES

SEQ ID
NOs: added

G3809_O_sativa (593)	I	S	I	S	E	T	Q	Q	T	V	L	L	G	V	K	K	A	L	V	F	Y	R	G	R	P	P	K	G	T	K		
pG3807_O_sativa (594)	V	I	Y	N	-	-	-	-	S	Q	T	V	G	M	K	R	T	L	V	F	H	L	G	K	P	P	R	G	D	R		
pG521 (595)	V	S	Y	N	-	-	-	-	D	E	V	T	G	K	I	R	T	L	I	Y	H	Y	G	K	I	P	R	G	D	R		
pG3041 (596)	I	L	N	G	-	-	-	-	S	K	V	V	G	M	K	K	T	L	V	Y	H	K	G	R	A	P	R	G	E	R		
pG3832 (partial) (592)	I	T	R	K	R	-	G	N	H	E	T	I	G	E	K	K	V	L	M	F	Y	M	S	G	S	R	-	-	-	-		
pG515 (20)	I	M	R	-	-	-	-	-	N	R	Q	Q	I	G	E	K	K	I	L	M	F	Y	T	S	K	E	S	-	-	-		
pG2053 (10)	I	L	R	-	-	-	-	-	N	R	Q	E	I	G	E	K	K	V	L	M	F	Y	M	S	K	E	L	G	S	K		
pG516 (22)	I	M	R	K	T	-	G	D	R	E	K	I	G	E	K	K	R	V	L	V	F	K	N	H	G	S	-	-	-	-		
pG517 (24)	V	M	R	K	R	-	G	N	R	E	K	I	G	E	K	K	R	V	L	V	F	K	N	R	D	G	S	-	-	-		
pG513 (597)	I	K	S	G	-	-	-	-	K	T	K	I	I	G	V	K	R	T	L	V	F	Y	T	G	R	A	P	K	G	T	R	
pG960 (598)	I	K	S	-	-	-	-	-	K	K	T	L	I	G	M	K	K	T	L	V	F	Y	R	G	R	A	P	K	G	E	R	
pG3834_B_rapa (599)	I	K	S	-	-	-	-	-	K	K	M	I	I	G	M	K	K	T	L	V	F	Y	R	G	R	A	P	I	G	E	R	
pG1455 (600)	I	K	S	-	-	-	-	-	K	K	M	I	I	G	M	K	K	T	L	V	F	Y	R	G	R	A	P	R	G	E	R	
pG3805_O_sativa (601)	V	N	S	Q	-	-	-	-	R	-	R	A	V	G	M	K	K	T	L	V	Y	Y	R	G	R	A	P	H	G	S	R	
pG958 (602)	V	T	S	H	-	-	-	-	S	-	R	M	V	G	T	K	K	T	L	V	Y	Y	R	G	R	A	P	H	G	S	R	
pG1924 (603)	V	T	S	Q	-	-	-	-	S	-	R	A	I	G	M	K	K	T	L	V	Y	Y	R	G	R	A	P	Q	H	G	S	R
pG518 (604)	V	S	W	R	-	-	-	-	D	-	R	A	I	G	T	K	K	T	L	V	Y	Y	R	G	R	A	P	H	G	I	R	
pG3808_O_sativa (605)	I	F	R	G	-	-	-	-	K	-	A	L	V	G	M	K	K	T	L	V	F	Y	T	G	R	A	P	R	G	E	K	
pG3833_G_max (606)	I	F	R	G	-	-	-	-	K	-	S	L	V	G	M	K	K	T	L	V	F	Y	K	G	R	A	P	K	G	E	K	
pG523 (607)	I	F	R	G	-	-	-	-	K	-	S	L	V	G	M	K	K	T	L	V	F	Y	R	G	R	A	P	K	G	Q	K	
pG514 (608)	I	Y	R	G	-	-	-	-	K	-	S	L	V	G	M	K	K	T	L	V	F	Y	R	G	R	A	P	K	G	Q	K	
pG3806_O_sativa (609)	I	F	R	G	-	-	-	-	R	G	L	L	V	G	M	K	K	T	L	V	F	Y	M	G	R	A	P	R	G	E	K	
pG526 (610)	I	F	K	G	-	-	-	-	K	G	C	L	V	G	M	K	K	T	L	V	F	Y	R	G	R	A	P	K	G	E	K	
pG1454 (611)	V	L	A	S	D	-	-	-	G	N	Q	K	V	G	V	K	K	A	L	V	F	Y	S	G	K	P	P	K	G	V	K	
(701) (702)	I	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

FIG. 27F



	← NOcs added	190	200	210
G3809_O_sativa (593)	T S W I M H E Y R L A N A A S S S S - - - - -	L	S	-
pG3807_O_sativa (594)	T D W V M Y E Y R L E D K E L S A S G V K - - - -	L	V	K
pG521 (595)	T D W V I H E Y R L E D K V L A Q K N V P - - - -	L	P	-
pG3041 (596)	T N W V M H E Y R L V D Q D L D K T G V H - - - -	L	H	-
pG3832 (partial) (592)	S N W V M H E Y H A S C L S P N D - - - - -	A	D	-
pG515 (20)	S D W V I H E Y H G F S H N Q M M M T - Y - - -	G	M	T
pG2053 (10)	S D W V M H E Y H A F S P T Q M M M T - Y - - -	A	M	T
pG516 (22)	S D W A M H E Y H A T F S S P N Q - - - - -	A	N	-
pG517 (24)	T D W V M H E Y H A T S L F P N Q M M T Y - - - -	A	T	Y
pG513 (597)	T C W I M H E Y R A T E K D L D G T K S G - - - -	A	S	G
pG960 (598)	T N W I M H E Y R P T L K D L D G T S P G - - - -	P	P	G
pG3834_B_rapa (599)	T N W I M H E Y R A T D K D L D G T G P G - - - -	A	P	G
pG1455 (600)	T N W I M H E Y R A T D K E L D G T G P G - - - -	A	P	G
pG3805_O_sativa (601)	T D W V M H E Y R L D E E C E - T D T G - L Q - - -	L	T	G
pG958 (602)	T D W V M H E Y R L E E Q E C D - S K S G - I Q - - -	L	S	G
pG1924 (603)	T D W V M H E Y R L D D K D C D - D P S S - L Q - - -	L	S	S
pG518 (604)	T G W V M H E Y R L D E S E C E - P S A F G M Q - - - -	L	F	M
pG3808_O_sativa (605)	T G W V M H E Y R I H G K H A A N S K Q - - - - -	I	N	S
pG3833_G_max (606)	T D W V M H E Y R L D G K F S F H T L P K T A K - - - -	L	P	K
pG523 (607)	T N W V M H E Y R L D G K L S A H N L P K T A K - - - -	L	N	L
pG514 (608)	T N W V M H E Y R L E G K F S A H N L P K T A K - - - -	L	N	L
pG3806_O_sativa (609)	T P W V M H E Y R L D G K L P P - N L P R S A K - - - -	L	P	R
pG526 (610)	T N W V M H E Y R L E G K Y S Y N L P K S A R - - - -	L	Y	N
pG1454 (611)	S D W I M H E Y R L I E N K P N N R P P G C D F G N K K N S	L	N	R
(703)	T W V M H E Y R L K	L	K	S

	SEQ ID NOs added	220	230	240
G3809_O_sativa (593)		- - - - Y T S N M K Q L A S - - - -	- - - -	- - - -
pG3807_O_sativa (594)		- - - - D A C V L C K I F Q K S G P - - - -	- - - -	- - - -
pG521 (595)		- - - - D T Y V L C V L F K K N G - - - -	- - - -	- - - -
pG3041 (596)		- - - - D A F V L C R I F Q K S G S - - - -	- - - -	- - - -
pG3832 (partial) (592)		- - - - - - - - - - - - - - - - - - - -	- - - -	- - - -
pG515 (20)		- - - - - T L C K V M F N G G M - - - -	- - - -	- - - -
pG2053 (10)		- - - - - T I C K V M F K G D V - - - -	- - - -	- - - -
pG516 (22)		- - - - - - - - - - - G E R - - - -	- - - -	- - - -
pG517 (24)		- - - - - T V C K V E F K G E E - - - -	- - - -	- - - -
pG513 (597)		- - - - N P F V V C K L F K K Q D I V - - - -	- - - -	- - - -
pG960 (598)		- - - - S P Y V L C R L F H K K P D D - - - -	- - - -	- - - -
pG3834_B_rapa (599)		- - - - S P Y V L C R L F H K K P S D - - - -	- - - -	- - - -
pG1455 (600)		- - - - N P Y V L C R L F H K K P S D S - - - -	- - - -	- - - -
pG3805_O_sativa (601)		- - - - D A Y A L C R V F K K T A P G P K I I E H Y G V H H	- - - -	- - - -
pG958 (602)		- - - - D A Y A L C R V F K K S A - - - -	- - - -	- - - -
pG1924 (603)		- - - - D S Y A L C R V F K K - - - -	- - - -	- - - -
pG518 (604)		- - - - D A Y A L C R V F K K I V - - - -	- - - -	- - - -
pG3808_O_sativa (605)		- - - - Q E W V L C R V F K K S - - - -	- - - -	- - - -
pG3833_G_max (606)		- - - - N E W V I C R V F Q K S S - - - -	- - - -	- - - -
pG523 (607)		- - - - N E W V I C R V F H K K T A - - - -	- - - -	- - - -
pG514 (608)		- - - - - K W V C R V F Q K S A - - - -	- - - -	- - - -
pG3806_O_sativa (609)		- - - - E E W A V C R V F N K D - - - -	- - - -	- - - -
pG526 (610)		- - - - D E W V V C R V F H K N N - - - -	- - - -	- - - -
pG1454 (611)		L R L D D W V L C R I Y K K N N - - - -	- - - -	- - - -
(704)		. V L C R V F . K	- - - -	- - - -

FIG. 27H

	SEQ ID NO.	added	250	260	270
G3809_O_sativa (593)			- - - - -	S S S S S	S S S S S
pG3807_O_sativa (594)			- - - - -	G P K I G E Q Y G A P F N E D D W V	L D E D D W N
pG521 (595)			- - - - -	L G P R H G S Q Y G A P F K E E D W S	E E D W S
pG3041 (596)			- - - - -	G P K N G E Q Y G A P F V E E E W E	E E E W E
pG3832 (partial) (592)			- - - - -	- - - - -	- - - - -
pG515 (20)			- - - - -	R E K S S S P S S G V S G I E	V S G I E
pG2053 (10)			- - - - -	R E I S S S - A S Y G S E I E	E I E
pG516 (22)			- - - - -	R E F S - V A - - - T G S G I K	E I K
pG517 (24)			- - - - -	T E I S S S - - - T G S E I E	E I E
pG513 (597)			- - - - -	N G A A E P E E S K S C E V E P A V S S P T V V D E V E	V S D E V E
pG960 (598)			- - - - -	R V N G V K S D E A A F T A S N K Y S P D D T S	P D D T S
pG3834_B_rapa (599)			- - - - -	V A N C D E V E N V N A T P - T T T R C S R E D D N S	R E D D N S
pG1455 (600)			- - - - -	C D P A H C E E I E K V N F T P T T T R C S P D D T S	P D D T S
pG3805_O_sativa (601)			H V E Q P Q W M T S S I D R S P T L D V S C D G R G D D F E		
pG958 (602)			G T K K N K G T T N S E Q S T S S T C L Y S D G M Y E N L E		
pG1924 (603)			- - - - -	- - - - -	- - - - -
pG518 (604)			Q Q H Q P Y V H T - - - - -	S S N I S G S S F D V C S D L E	E L E
pG3808_O_sativa (605)			- - - - -	L E L A P A A A V G R R G A G A G	A G A G
pG3833_G_max (606)			- - - - -	G V K R T H I S G M M L D S Y G	L D S Y G
pG523 (607)			- - - - -	G G K K I P I S T L I R I G S Y G	I G S Y G
pG514 (608)			- - - - -	G G K K I P I S S L I R I G S L G	I G S L G
pG3806_O_sativa (609)			- - - - -	- - - - -	- - - - -
pG526 (610)			- - - - -	P S T T Q P M T R I P V E D F T	V E D F T
pG1454 (611)			- - - - -	A S R H V D N D K D H D M I D Y I	M I D Y I

FIG. 27I

	SEQ ID NOs added	280	290	300
G3809_O_sativa (593)		L C R I Y K - - - - -	- - - - -	- - - - - K K
pG3807_O_sativa (594)		E A N G E L S S - - - - -	- - - - -	- - - - - F A
pG521 (595)		D K E E E - - - - -	- - - - -	- - - - -
pG3041 (596)		E E D D M T F V P D - - - - -	- - - - -	- - - - - Q E D L
pG3832 (partial) (592)		- - - - -	- - - - -	- - - - -
pG515 (20)		Q S R R D - - - - -	- - - - -	- - - - -
pG2053 (10)		Q S R - D - - - - -	- - - - -	- - - - -
pG516 (22)		H T H - - - - -	- - - - -	- - - - -
pG517 (24)		Q I H - - - - -	- - - - -	- - - - -
pG513 (597)		M S E V S P V F P - - - - -	- - - - -	- - - - - K T
pG960 (598)		S D L V Q E T P S S - - - - -	- - - - -	- - - - - D A
pG3834_B_rapa (599)		S E M V Q E T D T S - - - - -	- - - - -	- - - - - R V
pG1455 (600)		S E M V Q E T A T S - - - - -	- - - - -	- - - - - G V
pG3805_O_sativa (601)		S S S F S F P T E T P M D S M H G G F G M Q M S A P H E D G		
pG958 (602)		N S G Y P V S P E T G G L T Q L G N N S S S D M E T I E N -		
pG1924 (603)		S E R - - - - -	- - - - -	- - - - -
pG518 (604)		I S S N T P Y N T A A H I Q P R F G N A N A - - I S D H D -		
pG3808_O_sativa (605)		T D V G P - - - - -	- - - - -	- - - - -
pG3833_G_max (606)		N E M V Y - - - - -	- - - - -	- - - - - S S
pG523 (607)		T G S S - - - - -	- - - - -	- - - - -
pG514 (608)		T D F N P - - - - -	- - - - -	- - - - - S -
pG3806_O_sativa (609)		R N D S F - - - - -	- - - - -	- - - - - D L
pG526 (610)		R M D - - - - -	- - - - -	- - - - - S L
pG1454 (611)		F R K I P - - - - -	- - - - -	- - - - -

FIG. 27J

		SEQ ID Nos. added	310	320	330
G3809_O_sativa (593)		E A N Q Q L Q H Y I D - - - - -	- - - - -	- - - - -	- - - - -
pG3807_O_sativa (594)		F S V P P C A L E S S N - - - - -	- - - - -	- - - - -	- - - - -
pG521 (595)		Y T Q N H L V A G P S - - - - -	- - - - -	- - - - -	- - - - -
pG3041 (596)		G S E D H V Y V H M D D I D Q K S E N F V V Y D A I P I P L	- - - - -	- - - - -	- - - - -
pG3832 (partial) (592)		- - - - -	- - - - -	- - - - -	- - - - -
pG515 (20)		S L I P Q L V N - - - - -	- - - - -	- - - - -	- - - - -
pG2053 (10)		S L I P L L V N - - - - -	- - - - -	- - - - -	- - - - -
pG516 (22)		S L I P P T N N S G V L - - - - -	- - - - -	- - - - -	- - - - -
pG517 (24)		S L I P L V N S - - - - -	- - - - -	- - - - -	- - - - -
pG513 (597)		E E T N P C D V A E S S L V I P S E C R S G Y S V P E V T T	- - - - -	- - - - -	- - - - -
pG960 (598)		A V E K P S D Y S G G C G Y A H S N - - - - -	- - - - -	- - - - -	- - - - -
pG3834_B_rapa (599)		H A Q N I S D D T E R C P R D Q G	- - - - -	- - - - -	- - - - -
pG1455 (600)		H A L D R S D D T E R C L S D K G N N D V K P D V S V I N N	- - - - -	- - - - -	- - - - -
pG3805_O_sativa (601)		K W M Q F L S E D A F N A T N P F L T N P V S A N F S C L P	- - - - -	- - - - -	- - - - -
pG958 (602)		K W S Q F M S H D T S F N F P P Q S Q - - - - -	- - - - -	- - - - -	- - - - -
pG1924 (603)		- - - - -	- - - - -	- - - - -	- - - - -
pG518 (604)		D W S Q Y L S Q N M P T S F S D Y G S - - - - -	- - - - -	- - - - -	- - - - -
pG3808_O_sativa (605)		S S M P M A D D V V G - - - - -	- - - - -	- - - - -	- - - - -
pG3833_G_max (606)		S A L P P L T D S S P S - - - - -	- - - - -	- - - - -	- - - - -
pG523 (607)		- - - - -	- - - - -	- - - - -	- - - - -
pG514 (608)		- - - - -	- - - - -	- - - - -	- - - - -
pG3806_O_sativa (609)		D L D D F L H L D A D - - - - -	- - - - -	- - - - -	- - - - -
pG526 (610)		E N I D H L L D F S S - - - - -	- - - - -	- - - - -	- - - - -
pG1454 (611)		P S L S M A A A S T G - - - - -	- - - - -	- - - - -	- - - - -

FIG. 27K

	SEQ ID NOs. added	340	350	360
G3809_O_sativa (593)		M M M D D - - - - -	- - - - -	D N D D E - - -
pG3807_O_sativa (594)		Q Q L A V S D N - - - - -	- - - - -	I G S S L D H C S E T N D
pG521 (595)		T S L A A K - - - - -	- - - - -	- - - A S H S Y A P -
pG3041 (596)		N F I H G E S S - - - - -	- - - - -	N N V E T N Y S D S I N
pG3832 (partial) (592)		- - - - -	- - - - -	- - - - -
pG515 (20)		S S L H R E D P S Q F G D V L Q E A P I E D A K L T E E L V	- - - - -	- - - - -
pG2053 (10)		- - - - -	- - - - -	- - - - -
pG516 (22)		S L F H S Q - - - - -	- - - - -	- - - E S Q N P S Q F S G
pG517 (24)		S S F H S Q - - - - -	- - - - -	- - - E L Q N S S Q S G V
pG513 (597)		T G L D D I D - - - - -	- - - - -	- - - W L S F M E F D -
pG960 (598)		T M I E A P E - - - - -	- - - - -	- - - E N L W L S C D L E D -
pG3834_B_rapa (599)		- - - - -	- - - - -	- - - - -
pG1455 (600)		T S V N H A E T S R A K D - - - - -	- - - - -	R N L G K T L V E E N P
pG3805_O_sativa (601)		S K V D V A L E - - - - -	- - - - -	- - - C A R L Q H R L T L P P
pG958 (602)		S K V D I A L E - - - - -	- - - - -	- - - C A R L Q N R M L P P V
pG1924 (603)		- - - - -	- - - - -	- - - - -
pG518 (604)		S K V N T E V Q - - - - -	- - - - -	- - - C E M F Q H Q M S L P P
pG3808_O_sativa (605)		P L M D V S - - - - -	- - - - -	- - - - -
pG3833_G_max (606)		S V T D S A Y - - - - -	- - - - -	- - - V P C F S N P I D V P R
pG523 (607)		T K T E P V Y - - - - -	- - - - -	- - - V P C F S N Q A E T R -
pG514 (608)		T K T E P V Y - - - - -	- - - - -	- - - V P C F S N Q T D Q N Q
pG3806_O_sativa (609)		P L I D - - - - -	- - - - -	- - - D P F A S T S - - -
pG526 (610)		P L I D - - - - -	- - - - -	- - - P S F M S Q T E Q P -
pG1454 (611)		H N V S R S M N - - - - -	- - - - -	- - - F F P G K F S G G -

FIG. 27L

		400										410										420																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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G3809_O_sativa (593)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

FIG. 27N

	SEQ ID Nos. added	430	440	450
G3809_O_sativa (593)	Q S H R M P R	- - - - -	- - - - -	- - - - - P P
pG3807_O_sativa (594)	C F S T D L N S V S	- - - - -	- - - - -	- - - - - R D G
pG521 (595)	D V P P L T A T	- - - - -	- - - - -	- - - - - V L P
pG3041 (596)	D K H S E T L Q S S D	- - - - -	- - - - -	- - - - - N I F G T D T S
pG3832 (partial) (592)	- - - - -	- - - - -	- - - - -	- - - - - - - - -
pG515 (20)	D I D D A K E K	- - - - -	- - - - -	- - - - - S I M
pG2053 (10)	D D G V D E Q V N	- - - - -	- - - - -	- - - - - H I M
pG516 (22)	D D - D E Q S K	- - - - -	- - - - -	- - - - - I V
pG517 (24)	N D G D E Q R N	- - - - -	- - - - -	- - - - - I M
pG513 (597)	G L Q S E S	- - - - -	- - - - -	- - - - - - - - -
pG960 (598)	G F Q F Q D G T S	- - - - -	- - - - -	- - - - - E P D V S L T E
pG3834_B_rapa (599)				
pG1455 (600)	G L H F Q D G A S	- - - - -	- - - - -	- - - - - E Q D A S L T D
pG3805_O_sativa (601)	S A S Y V N E L S S L V E M G V G T S	- - - - -	- - - - -	- - - - - N H E S A R L Q V
pG958 (602)	N F H G D F N Y S G E K V S C	- - - - -	- - - - -	- - - - - L E A N V E A V
pG1924 (603)	N - - - - -	- - - - -	- - - - -	- - - - - - - - -
pG518 (604)	N Q F Y N S N V D	- - - - -	- - - - -	- - - - - D H L I H I G
pG3808_O_sativa (605)	P A A H V T C F S	- - - - -	- - - - -	- - - - - - - - -
pG3833_G_max (606)	T L Y G V S S	- - - - -	- - - - -	- - - - - N H S
pG523 (607)	I Q P D F L Q	- - - - -	- - - - -	- - - - - M I P
pG514 (608)	I Q A D I F H	- - - - -	- - - - -	- - - - - R I P
pG3806_O_sativa (609)	- - - - -	- - - - -	- - - - -	- - - - - - - - -
pG526 (610)	S S P I Q P H	- - - - -	- - - - -	- - - - - H F N
pG1454 (611)	D G G G - - - - -	- - - - -	- - - - -	- - - - - M I N

FIG. 270

	SEQ ID NOs added	460	470	480
G3809_O_sativa (593)	S I S D	Y L L D Y S - - - - -	- - - - -	- - - - -
pG3807_O_sativa (594)	S L P D	S T A D Y D - - - - -	- - - - -	- - - - -
pG521 (595)	P L T S	D V I A Y N P F S - - - -	- - - - -	- - - - -
pG3041 (596)	C Y N D	F P V E S N Y L I G E A F L D - - - -	- - - - -	- - - - -
pG3832 (partial) (592)	- - - -	- - - - -	- - - - -	- - - - -
pG515 (20)	F M H D	N R S D Y R P P - - - - -	- - - - -	- - - - -
pG2053 (10)	N M K D	D R N N H R P Q - - - - -	- - - - -	- - - - -
pG516 (22)	S M Q D	D R N N H T P Q - - - - -	- - - - -	- - - - -
pG517 (24)	F M Q D	H R S D Y T P L - - - - -	- - - - -	- - - - -
pG513 (597)	- - S E	L F K N H N - - - - - E D Y I Q T - - - -	- - - - -	- - - - -
pG960 (598)	L L E E	V F N N P D D F S C E E S I S R E N P A V S P N G I	- - - - -	- - - - -
pG3834_B_rapa (599)	V L D E	V F H N H N - - - - - E S S N D R K D - F V L P N - M	- - - - -	- - - - -
pG1455 (600)	E I A D	M E V F K D E K K - - - - -	- - - - -	- - - - -
pG3805_O_sativa (601)	D M Q E	H H V N F K E E R - - - - -	- - - - -	- - - - -
pG958 (602)	- - N N	N N Y N N D Y E - - - - -	- - - - -	- - - - -
pG1924 (603)	N L D E	Q S Y I E E Q E - - - - -	- - - - -	- - - - -
pG518 (604)	A L E G	Q F L D T P Y L L P - - - - -	- - - - -	- - - - -
pG3808_O_sativa (605)	F Y N T	Q G V Q L Q A P - - - - -	- - - - -	- - - - -
pG3833_G_max (606)	L Y Q P	Q S L N I S E - - - - -	- - - - -	- - - - -
pG523 (607)	L Y Q T	Q S L Q V S M N - - - - -	- - - - -	- - - - -
pG514 (608)	P A N L	M H N H Y G Y F - - - - -	- - - - -	- - - - -
pG3806_O_sativa (609)	S Y Q S	I F N H Q V F G - - - - -	- - - - -	- - - - -
pG526 (610)	N I G T	D S V D H D N - - - - -	- - - - -	- - - - -
pG1454 (611)				

FIG. 27P

	SEQ ID Nos. added										490	500	510																
G3809_O_sativa (593)	-	-	-	-	-	-	-	-	-	-	D D L P P S T D Q Q T P S L H L G F T A V N - - -																		
pG3807_O_sativa (594)	-	-	-	-	-	-	-	-	-	-	N D N E V S S D D G E A I F N E L D E L D S Q																		
pG521 (595)	-	-	-	-	-	-	-	-	-	-	S S P L L E V P Q V S L D G G E L N S M L D L																		
pG3041 (596)	-	-	-	-	-	-	-	-	-	-	P N S N L L E N D G L Y L E T N D L S S T Q Q D																		
pG3832 (partial) (592)	-	-	-	-	-	-	-	-	-	-	- - - V H V L L - - - - - - - - -																		
pG515 (20)	-	-	-	-	-	-	-	-	-	-	N S L T G V V F S D D V S S D D D N D S D L L T P K																		
pG2053 (10)	-	-	-	-	-	-	-	-	-	-	K P L T G V L I D D S S D D D D D S D L L S P T																		
pG516 (22)	-	-	-	-	-	-	-	-	-	-	K P L T G V F S D H - S T D G S D S D P I S A T																		
pG517 (24)	-	-	-	-	-	-	-	-	-	-	K S L T G V F S D D - S S D D N D S D L I S P K																		
pG513 (597)	-	-	-	-	-	-	-	-	-	-	Q Y G T N D A D E Y M S K F L D S F L D I P Y E P																		
pG960 (598)	F	S	S	A	K	M	L	Q	S	A	P	E	D	A	F	F	T	D	T	D	A	E	M						
pG3834_B_rapa (599)	M	H	W	P	G	N	T	R	L	S	T	E	Y	P	F	L	K	D	S	V	A	F	V	D	G	S	A	E	V
pG1455 (600)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
pG3805_O_sativa (601)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
pG958 (602)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
pG1924 (603)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
pG518 (604)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
pG3808_O_sativa (605)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
pG3833_G_max (606)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
pG523 (607)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
pG514 (608)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
pG3806_O_sativa (609)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
pG526 (610)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
pG1454 (611)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

FIG. 27Q

FIG. 27R

FIG. 27S

SEQ ID	NC_010833.1
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FIG. 27T

	SEQ ID NOs added	610	620	630
G3809_O_sativa (593)	E E Y Y S I S T A D M L H A S S S T S N N K - - - -			
pG3807_O_sativa (594)	K T E Q Y L E L N D L S F S L A D D P D P C N L L T T N L			
pG521 (595)	R H P D G F V N K E A P V F L G D G N F S G M F D L S N D Q			
pG3041 (596)	R S K H V E E K E K D E A S C S K Q V D A D A T E F E P D			
pG3832 (partial) (592)				
pG515 (20)	S P T S T I N L V S L T Q E V S Q A L I T S I D T A E K K K			
pG2053 (10)	- - - D Q I N L V S L T Q E V S Q A L I T S I D T P E K I K			
pG516 (22)	S P N - S I K L V S L A Q E V S K T P G T G I D N D - - -			
pG517 (24)	S P D S T V Q L V S L T Q E V S Q G P G - - - - - - -			
pG513 (597)	R A R R A Q A P G C A E Q F V M Q G D A S R R L R L Q V N L			
pG960 (598)	R A R Q P Q N - R Q S T G L I N Q G I A P R R I R L Q L Q S			
pG3834_B_rapa (599)				
pG1455 (600)	K A R S R E N Q R D L D S V V D Q Q G T A P R R I R L Q I E Q			
pG3805_O_sativa (601)	N H R L F V S R V A A A K T F F H R I E P S K K V S F H S N			
pG958 (602)	S H G L F V T T R Q V T N T F F Q Q I V P S Q T V I V Y I N			
pG1924 (603)	- -			
pG518 (604)	N H K M L I S T R Q T T E I L Y Y Q V V P S Q I L K I H I N			
pG3808_O_sativa (605)	G G G W Y C N K G E R E R L S G A S Q D T G - - - - -			
pG3833_G_max (606)	S Q K T S L S T D V K A E I S S L G K R H F E N - - - Q N N			
pG523 (607)	S Q E T G V S N - - - T D N S S V F E F G R K R - - - F D H			
pG514 (608)	S Q E T G V S T D M N T D I S S D F E F G K R R - - - F D S			
pG3806_O_sativa (609)	M A D Q A I R R F C K A E A S T A C F S G A D A - - - D V D			
pG526 (610)	S S D V N A N M T T T E V S S G P V M K Q E M - - - G M M			
pG1454 (611)	D E E Q D A S P S K R F H G V G G G G D C S N - - - -			

FIG. 27U

FIG. 27V

	SEQ ID NOs added	670	680	690
G3809_O_sativa (593)		- - - - -	- - - - -	- - - - - S T Q I N
pG3807_O_sativa (594)		- - - - -	- - - - -	- - - - - D Q N H P E L
pG521 (595)		- - - - -	- - - - -	- - - - - V V E L Q D L I Q S
pG3041 (596)		- - - - -	- - - - -	- - - - - A I P A P L A N A S E F
pG3832 (partial) (592)		- - - - -	- - - - -	- - - - - P Y D D A Q Q G T E I G
pG515 (20)		- - - - -	- - - - -	- - - - - P Y D D A Q Q G T G A G
pG2053 (10)		- - - - -	- - - - -	- - - - - A Q Q G T E I G
pG516 (22)		- - - - -	- - - - -	- - - - - Q V T V I R
pG517 (24)		- - - - -	- - - - -	- - - - - D S T Q L Q F I K K E
pG513 (597)		- - - - -	- - - - -	- - - - - E E V N E G H T V I P E
pG960 (598)		- - - - -	- - - - -	- - - - - E E E D E V Q S A M S K
pG3834_B_rapa (599)		- - - - -	- - - - -	- - - - - S I F S K F K A L I R - - - - - D K F L M M R
pG1455 (600)		- - - - -	- - - - -	- - - - - R I N G V S S T V L G Q W R K F A H V I G F I P M L L L M R
pG3805_O_sativa (601)		- - - - -	- - - - -	- - - - - - - - - - - - - - - W M Q
pG958 (602)		- - - - -	- - - - -	- - - - - - - - - - - - - - - E E R T M L M E
pG1924 (603)		- - - - -	- - - - -	- - - - - - - - - - - - - - - L T S S
pG518 (604)		- - - - -	- - - - -	- - - - - - - - - - - - - - - A A A V A
pG3808_O_sativa (605)		- - - - -	- - - - -	- - - - - - - - - - - - - - - S P S S G
pG3833_G_max (606)		- - - - -	- - - - -	- - - - - - - - - - - - - - - S S S T G
pG523 (607)		- - - - -	- - - - -	- - - - - - - - - - - - - - - L L S F P D S
pG514 (608)		- - - - -	- - - - -	- - - - - - - - - - - - - - - S K S Y E D L
pG3806_O_sativa (609)		- - - - -	- - - - -	- - - - - - - - - - - - - - - M S S S M M E
pG526 (610)		- - - - -	- - - - -	- - - - - - - - - - - - - - -
pG1454 (611)		- - - - -	- - - - -	- - - - - - - - - - - - - - -

FIG. 27W

	SEQ ID NO.	added	700	710	720
G3809_O_sativa (593)			F S S I F E P - - - - -	- - - - -	- - - - -
pG3807_O_sativa (594)			E T R F E Q G S - - - - -	- - - - -	- - - - -
pG521 (595)			P T P H P P - - - - -	- - - - -	- - - - -
pG3041 (596)			P T K D A A I R L H A A Q S S - - - - -	- - - - -	- - - - -
pG3832 (partial) (592)					
pG515 (20)			E H K L G Q E T - - - - -	- - - - -	- - - - -
pG2053 (10)			G Q K L G Q E T - - - - -	- - - - -	- - - - -
pG516 (22)			E H K L G Q E T - - - - -	- - - - -	- - - - -
pG517 (24)			E H K L G E E S - - - - -	- - - - -	- - - - -
pG513 (597)			V K D T T E T M T K G C G - - - - -	- - - - -	- - - - -
pG960 (598)			A K E A A K Y S E K S G S - - - - -	- - - - -	- - - - -
pG3834_B_rapa (599)					
pG1455 (600)			V V E E E P A N L S A Q G T A - - - - -	- - - - -	Q R R I R L
pG3805_O_sativa (601)			P S H S Y Q R L G S K E T T V N E L L Q I V S L L A P K Q	- - - - -	- - - - -
pG958 (602)			C V H R G N S N K N R - - - - -	- - - - -	G S E G Y S R Q P T
pG1924 (603)			F I T D D A - - - - -	- - - - -	- - - - -
pG518 (604)			E D S D D S - - - - -	- - - - -	- - - - -
pG3808_O_sativa (605)			E V N P G E - - - - -	- - - - -	- - - - -
pG3833_G_max (606)			P M D L A T - - - - -	- - - - -	- - - - -
pG523 (607)			P V D L E P - - - - -	- - - - -	- - - - -
pG514 (608)			P V D L E P - - - - -	- - - - -	- - - - -
pG3806_O_sativa (609)			I T D Y S Y - - - - -	- - - - -	- - - - -
pG526 (610)			C D L R G D - - - - -	- - - - -	- - - - -
pG1454 (611)			E T P P L M Q - - - - -	- - - - -	- - - - -

FIG. 27X

FIG. 27Y

	SEQ ID NOs. added	760	770	780
G3809_O_sativa (593)		H Q L M S S H N D D T S I		
pG3807_O_sativa (594)		A T I S N A A C S A S T V G D H V T		
pG521 (595)		D - - - D S R S N G Q T K D D		
pG3041 (596)		L D L I L S L G L V Q G N T A P E K S G N S S A W A M L I F		
pG3832 (partial) (592)				
pG515 (20)		H R M I Q K F V K K I H L C S S I S R T		
pG2053 (10)		H R M I Q I F V K K I H Q C S S I S R T		
pG516 (22)		H R M I Q K F V K K I H L R T		
pG517 (24)		Y R M I H R L V K K I H Q C Y S I S R T		
pG513 (597)		S F I F K K I A A M G C S Y R G L F R V G - - - - -		
pG960 (598)		E R F A D D E V Q V Q S T K R E R E - - - - -		
pG3834_B_rapa (599)				
pG1455 (600)		E M Q E K E D I S S S S W Q K K S L V Q F S S V V I I		
pG3805_O_sativa (601)		L W L P L S K G K G I S S M F L S G K W T - - - - -		
pG958 (602)		- - M V D E Q G F R F Q D S F V L K K L G - - - - -		
pG1924 (603)		- - - - A A M G H G Q G V Y		
pG518 (604)		- - - - V A K M K L K Q I S L V A K R Y Y - - - - -		
pG3808_O_sativa (605)		A W I I T T R P S G P I E I F I H H		
pG3833_G_max (606)				
pG523 (607)				
pG514 (608)				
pG3806_O_sativa (609)				
pG526 (610)				
pG1454 (611)		D G L F R T T S Y Q L P G L N W Y S S		

FIG. 27Z

	SEQ ID NO. added	790	800	810
G3809_O_sativa (593)				
pG3807_O_sativa (594)				
pG521 (595)				
pG3041 (596)		M C F W V L L S V S F K V S I L V S S R		
pG3832 (partial) (592)				
pG515 (20)				
pG2053 (10)				
pG516 (22)				
pG517 (24)				
pG513 (597)		- - - - - V V A V V C V M S V C S L V A		
pG960 (598)		- - - - - - - - - - I K C S L M		
pG3834_B_rapa (599)				
pG1455 (600)		V A V I V V L V E I W K E S R D A K C S F L F H Q L D S F K		
pG3805_O_sativa (601)		- - - - - F L T S A L A I S T P A E C D H		
pG958 (602)		- - - - - L S L A I I L A V S T I S L I		
pG1924 (603)				
pG518 (604)		- - - - - K C L T I I F		
pG3808_O_sativa (605)				
pG3833_G_max (606)				
pG523 (607)				
pG514 (608)				
pG3806_O_sativa (609)				
pG526 (610)				
pG1454 (611)				

FIG. 27AA

SEQ ID Nos. added		820	830	840
G3809_O_sativa	(593)			
pG3807_O_sativa	(594)			
pG521	(595)			
pG3041	(596)			
pG3832 (partial)	(592)			
pG515	(20)			
pG2053	(10)			
pG516	(22)			
pG517	(24)			
pG513	(597)			
pG960	(598)			
pG3834_B_rapa	(599)			
pG1455	(600)			
pG3805_O_sativa	(601)			
pG958	(602)			
pG1924	(603)			
pG518	(604)			
pG3808_O_sativa	(605)			
pG3833_G_max	(606)			
pG523	(607)			
pG514	(608)			
pG3806_O_sativa	(609)			
pG526	(610)			
pG1454	(611)			

G M F T

FIG. 27BB

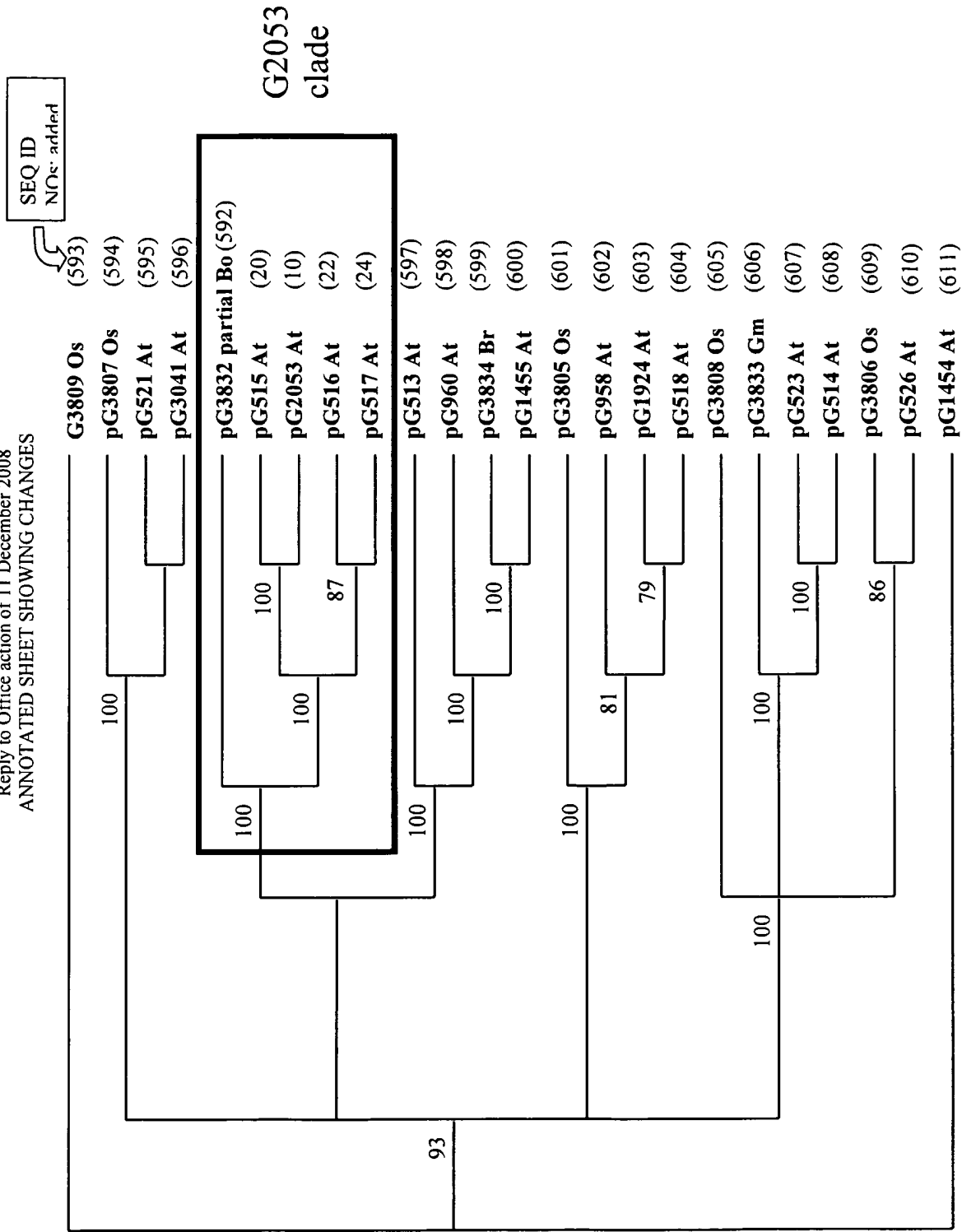


FIG. 28